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ON SOME MEDICINAL PLANTS OF GREECE.

BY PROF. X. LANDERER, ATHENS.

Allium.—Garlic was used in ancient times for culinary and medicinal purposes, and has preserved its reputation to the present day. The bulb, ἀγλίδες, was originally used as a prophylactic against witchcraft and enchantments, and god-fathers attached it to the bodies of babes named after them. The species of allium cultivated in oriental countries are *Allium sativum*, *A. subhirsutum*, *A. descendens*, *A. Porrum*, *A. Schoenoprasum*, *A. Ceba* and *A. Moly*, the latter having been extensively used as a protection against the evil influences of the renowned enchantress, Circe. The onion is largely consumed in the Orient; together with bread, it forms the principal nourishment of the poorer classes, and, with grapes, tomatoes, olives and wine, it constitutes the sustenance of thousands of travelers in the summer time from morning till night.

Asphodelus racemosus and *bulbosus* are interesting plants, known from the remotest time. Being found in cemeteries, it was consecrated to Persephone and the divinities of Hades. Its principal use was against the bites of venomous insects, snakes and scorpions, and in inflammation of the testicles. A very strongly adhesive substance is prepared from these bulbs, in Turkey, by exsiccating them thoroughly, in suitable ovens, when they acquire the glutinous properties of dextrin, and are employed as paste by bookbinders and shoemakers. Pythagoras called the plant Πανχράτειον, pancration, a plant governing all, or possessing all properties. This name was adopted by Linnæus for *Panocratium maritimum*, which grows near the sea coast, and the bulb of which is not unfrequently exported as an admixture of squill; its flowers are very beautiful and have a delicious odor. The bulb of it and of *Scilla maritima*, boiled with honey, are esteemed as excellent reme-

dies in chronic bronchitis and pulmonary consumption, and it is said that by the use of these remedies Pythagoras had extended his life to 134 years. From Theognis we have the proverb "e scilla non nascitur rosa." The name scilla, not *squilla*, is derived from the Greek verb *σκελλῆεν*, because the bulb can be readily divided into small pieces or scales.

Lagoecia cuminoides is commonly called lagokoimitia or hare's bed (*λαγῶς*, hare), because the young hares are said to be always found hidden under this plant, which is esteemed in the Orient against nephritic lithiasis.

Ceterach officinarum, Willd.—Many years ago, when I was examined, the question was asked, whether sterility could be produced, to which I answered, "No, except by abortifacient medicines, such as savin, ergot, powerful drastics and emmenagogues." Some years ago a midwife was accused of having given to a rich lady some medicine to prevent her bearing children. Several plants having been sent to me for examination, I found among them the one mentioned above, which is the *Asplenium Ceterach*, Lin., and which appears to be employed for the purpose indicated; its effects, however, remain to be examined.

Dictamnus creticus.—This plant is indigenous to the island of Crete, where the flowers and leaves are collected, tied up in small bundles, and sold as an excellent remedy against dysmenorrhœa and amœnorrhœa of young women. In ancient times it enjoyed a very great reputation in many ailments of women, and it is to be regretted that it, like many other useful plants, has been neglected in modern times in favor of others not possessing the same virtues; but it is still employed to some extent as a reliable emmenagogue, together with the well-known and highly esteemed *Ruta graveolens*.

Sonchus oleraceus.—The ancient name (*sonchos*) of this plant is derived from *ζωηχέειν*, life-giving. It has enjoyed a high repute for its medicinal properties among the ancient authors, Theophrastus, Pliny, Dioscorides, &c. "*Sonchus quod succum salubrem fundit qui stomachi rosiones lenit et nutricibus lac augit.*" For these reasons, the plant is boiled and eaten with oil, and nursing women apply it in the form of cataplasms, with the view of augmenting the secretion of milk. The plant is greatly esteemed in diseases of the liver, particularly in jaundice.

Cuscuta epilinum, *Toad flax*, is a parasitic plant found upon *Satureja*

and Thymus, the latter of which is frequently completely covered with it. It occurs, also, often upon the flax (λευνον), whence is derived its specific name, epilimon. It was recommended by Pliny in dropsical affections, in which it is still employed, also in angina and gouty complaints.

Nerium Oleander.—This beautiful plant is called in Greece rhododaphne (from ῥόδον, rose, and δάφνη, laurel or bay), or rose bay, and picrodaphne (πικρόζ, bitter), or bitter bay; the name nerion, νήριον, is derived from νηρος, humid, and indicates a water-loving plant, because it grows in moist places. When taken internally, the extreme bitterness nearly always produces nausea; but, after long-continued use, it has been found to be of some value in epilepsy, by reducing considerably the frequency of the paroxysms, although not effecting a complete cure.

Anagyris fœtida is a leguminous tree, the leaves of which have purgative properties, and are employed by the peasants like senna, under the name of pseudo-sinamiki, false senna leaves. When the leaves are rubbed between the fingers, their very offensive odor is developed, which is likewise perceived when the tree is shaken either by hand or by the wind. This is the origin of the Greek proverb, "Ανάγυρην κινῆς—μὴ ανάγυρην," which has been in use from very remote times, and which signifies (Do not shake the anagyris), to avoid stirring up unpleasant affairs which in the course of time have been forgotten. The fruit having a resemblance to beans, they are called agriophaseo, or wild beans, in the island of Cyprus.

Atractylis gummifera, by the ancient Greeks called *chamaileon*, is a handsome, thistle like plant, yielding an exudation, which is collected by women and children, and sold as pseudo-mastich or acantho-mastich. The pieces, consisting of agglutinated tears, are oblong in shape, and usually about two inches in length by one inch in thickness. Its root bears some resemblance to celery and parsnip, and is occasionally mistaken for these esculent roots. In the island of Melos four children were poisoned and died last year from eating the root of this plant, and another case had occurred, a few years ago, in the island of Mykonos.

The holy plants Verbenæ.—Not only the genus which at present bears that name, but medicinal plants generally, were in olden times known by the name of verbenæ, i. e., ἱερο βοτάνη, hierobotane, or holy plants,

because they enjoyed great reputation amongst the Greeks and Romans against execrations, apparitions, witchcraft and other demoniacal influences. The priests using these plants were called *verbenarii*.

Arum Dracunculus, maculatum, &c.—All plants which, in their flowers or roots, either by color or form, have some resemblance to a snake or scorpion, are called ophidochorton (ὄφις, a snake), ophidobotanon, or skorpidochorton. Such plants are *Heliotropium hirsutum*, *Scolopendrum officinale*, *Lithospermum apulum*, *Echinum vulgare*, and principally *Arum dracunculus*, so named from its resemblance in color to the skin of some serpents and the tiger; its horrible odor resembles that of the cadavers of some animals. All the above-named plants are used in the Orient by the common people as a prophylactic as well as a cure of the bites of venomous snakes and scorpions, which, in Greece, have frequently resulted in death.

Eruca sativa is extensively cultivated in oriental countries as a potherb and salad. The seeds, which have a biting flavor when masticated—hence the name from ἐρῶω, I draw—are collected in Macedonia and often exported to France, where they are probably used as an admixture to white mustard.

Cataplasms are almost universally employed in all oriental countries, and are popularly resorted to as the beginning of the treatment in nearly all complaints. The principal articles used for this purpose are flaxseed and mallow flowers, okra fruit (*Hibiscus esculentus*), Corinthian raisins and figs; a mixture of wax and honey is likewise frequently used. Against the bites of venomous snakes and scorpions, the leaves of *Solanum Melongena*, called meltsanes, are used in the form of cataplasms, besides the various parts of plants mentioned above, which appear to be used mainly on the principle: *Similia similibus curantur*. Cataplasms are often made with wine, and with wine must and milk.

A very curious cataplasm was used during the visit of the plague for accelerating the suppuration of the buboes; it consisted of a mixture of caviar and flaxseed, and was used with good success, upon the advice of the nurses, in my own case, after having been infected by a pestilential cat in the island of Paros, where I had been sent by the government to assist in arresting this horrible disease.

The fever plant, *thermochorton*, in the times of Hippocrates was the lesser centaury, *Erythræa centaurium*, which is still used with marked

success in the chronic fevers of oriental countries; it is made into a strong decoction together with the leaves of the olive tree. The name of the plant is supposed by some to be derived from *Κένταυρος*, centaur, while others refer its origin to the words *centum*, a hundred, and *aurum*, gold, signifying a plant worth a hundred gold pieces.

In this connection it may be stated that there are annually consumed in Greece about 20,000 kilos, and in all the oriental countries over 500,000 kilos of sulphate of quinia.

PRESSED HERBS.

BY J. U. LLOYD, CINCINNATI, O.

Herbs are pressed to reduce their bulk, they then are compact, require but little space for storage, and are easily handled. If I mistake not, I have named about the only advantages pressed herbs possess over loose.

My experiments teach me that they deteriorate nearly, if not quite, as rapidly when pressed as loose. In either case, they are exposed to the action of the atmosphere, and the decomposing effects of the moisture with which it is usually laden. Insects attack both. Pressed herbs, without a doubt, mould quickest. Excepting the mere matter of bulk there is no inducement for pressing herbs. Common paper bags, or even cotton sacks, will preserve them as well. The desideratum of the day is a process for preserving the delicate medicinal principles of our herbs from season to season. If this can be accomplished, in conjunction with compactness of form, so much the better, otherwise let us choose quality first, even though it be at the sacrifice of convenience in handling.

In the proceedings of the Amer. Pharmaceutical Association, 1875, we find an article from the pen of Mr. A. W. Miller, upon an improved method for preserving herbs, said improvement being the substitution of pasteboard boxes for paper. The herbs, instead of being pressed by the dealers into compact masses, as is now customary, are, by the pharmacists themselves, firmly packed into the box by hand, remaining loose enough to admit of examination at any time. In my opinion, the important point in connection with dried herbs is preservation, not convenience. Is there any advantage to be derived, in this respect, from the substitution of pasteboard boxes for our machine

presses, or even paper or cotton bags? Will boxes prevent the ravages of insects, or preserve the delicate organic principles upon which many of our herbs depend for their medicinal values? This is the direct issue, not convenience in packing and the value of shelf room.

Personally, I have met with many aggravations respecting loose and pressed herbs, barks and roots, as found upon the market. Necessity has compelled me to experiment upon their preservation. The subject is very important to every druggist and pharmacist, and I feel that a brief description of the most successful of my experiments will be of interest to many readers of the "Journal." To preserve herbs with any satisfaction, I was compelled to use air-tight tin cans. Gather the herb when in its prime, quickly and carefully dry it, then, by hand, press it into the can, sprinkle upon it chloroform, in the proportion of half an ounce to each pound, replace the cover immediately and render the can air tight by painting the edges with melted beeswax. Herbs like peppermint, spearmint, &c., which depend for their virtues mostly upon delicate essential oils, can be nicely preserved in this way. Roots and herbs that are particularly liable to the attacks of insects, *e. g.*, parsley root, burdock root, motherwort, will show no sign of their presence. Is there any objection to chloroform in this connection? I think not; it is quickly dissipated when exposed to the atmosphere; it certainly is of much value, insect life being destroyed by its vapor; without it, even though in air-tight cans, specimens will be attacked. Aside from this, I believe the vapor of chloroform exerts a preservative influence over most of the delicate proximate principles of our plants.

Any druggist can have tin cans made to order, at small expense; with careful handling they will last many years, being refilled each season. Of course the process necessitates some trouble, and when the customer is waited upon, a little time must be consumed in replacing and waxing the cover. It is time well employed, however, for the majority of customers will prefer paying double the price of ordinary herbs for those preserved in this manner.

The season is now approaching for replenishing the stock of botanical specimens. This stock must last until next year. Druggists can gather many articles they will otherwise be compelled to purchase. Pharmacists who knowingly will not allow a grain of other inferior and adulterated medicines to enter their stores, are compelled to dis-

pense from their counters, each year, a large amount of old and worthless pressed herbs, often mouldy, and usually full of stems, sticks, dirt, &c. They must take what the market affords, unless they gather prime articles at the proper season. But it may be well to remember that prime herbs in August are entirely different materials the following January, unless precautions are taken to preserve them.

The process of preserving herbs in tin cans, by means of a little chloroform, was suggested to me by the late Prof. W. B. Chapman, of this city, who had met with remarkable success in applying it to ergot.

MODERN METHODS IN PHARMACY.

BY JOHN F. HANCOCK.

In considering a subject, the mind should not be fettered by prejudice, nor should a new method or invention be condemned before the application of careful tests. The pharmacist who desires his profession to be progressive, should encourage invention and discovery, and adopt methods which lighten his labors by facilitating neatness and accuracy in manipulation and expedition in the dispatch of business. The term "Elegant Pharmacy" is frequently misapplied, but we often notice elegance in quality and style of many preparations, which mark a striking contrast between *old* and *new methods*. Elegance consistent with accuracy, should be aimed at by all pharmacists who hope to excel in their calling. The primitive forms in which medicines have been presented, are very much modified through the influence of science and education. The old-fashioned decoctions and infusions have been displaced to a great extent by tinctures, fluid and solid extracts; but these preparations, though vastly superior, were not much favored at first. The increase of chemical knowledge has developed methods by which crude drugs have yielded their active principles in a pure and concentrated form.

The old style "bolus" has lost its repulsiveness by the process of extraction, and its offspring, the modern pill, in being prepared of extracts, alkaloids, resinoids, etc., is unobjectionable in size, and rendered more acceptable by the process of coating with sugar or gelatin, so that in its transit to the stomach, the palate is not offended. The forms of medicines known as granules, pearls, dragees, globules, capsules, cachets and compressed sugar and gelatin coated pills, are of

recent introduction, and mostly of French origin. Thus by modern methods in pharmacy, nauseating remedies are relieved of disagreeable taste. Medicines in powder form are now placed between two concave wafer discs, and in the cachet thus formed, can be swallowed without the slightest inconvenience. Another important class of modern remedies are the chemicals. Many of these are administered in the form of solution, which is sometimes objectionable in many cases, owing to their disagreeable taste. The essential oils and balsams are also frequently objectionable on this account, in consideration of which the artistic pharmacists of France devised new methods which have been largely imitated in this country by manufacturing pharmacists.

An English writer, referring to the practice of pharmacy in France, calls it the "Pharmacy of Sugar." Careful inquiry will disclose the fact, that the pharmacy of science and art would be the more appropriate term; for they not only include sugar largely in their preparations (thus wisely employing the confectioner's art, when practicable), but have taken an original step in the introduction of soluble gelatin or gluten capsules, as a vehicle for the administration of nauseous remedies. Although this art is being imitated in the United States, the results do not compare with those of the French; at least, we have not met with medicated gelatin capsules made here with liquid contents that favorably compare with those furnished by the importers of French medicines. Those who examine these medicated globules are pleasantly impressed with their neatness of finish, regularity of size, transparency, and the complete manner in which each globule is filled. The attractive form in which French remedies are presented constitute them formidable rivals of the delectable homœopathic granules. French pharmacists employ the culinary art also—even that of sacred origin; for, doubtless, the use of unleavened bread, suggested medicine wafers which idea has been brought to a high degree of perfection by M. Limousin, of Paris, in the introduction of concave wafer discs. The preparation of "cachets de pain," is a new method in pharmacy of utility and importance, which when understood, will be generally appreciated. These envelopes of bread afford the most convenient means extant for the extemporaneous and tasteless administration of medicines in powder form. With the press and wafers, prescriptions can be conveniently and expeditiously dispensed in a tasteless form, when it would be impossible to do so by any other convenient means.

A review of the history of the introduction of "cachets de pain" in this country, will explain the opposition that has been urged against them. If we are correctly informed, a pharmacist of a Western city, on a visit to Paris, saw the cachets, and being informed of their popularity, obtained from M. Limousin a lever press and wafer discs, which he successfully introduced into his own trade. Recognizing merit in the method, he imported more of the discs, with a view of selling them to the profession; but instead of importing the presses of Limousin, and continuing to import his wafer discs, which leave nothing to be desired, arrangements were made to supply presses and discs of home manufacture, greatly inferior to the French, and at prices higher than Limousin's should have been sold for.

This condition of things engendered opposition, and, in our opinion, prevented the general adoption of the method, or at least, made it unpopular with some. The press and wafers of American manufacture, which we have seen, are not to be compared with Limousin's; hence, we are not surprised that the former should not be received with favor.

The time consumed in the preparation of cachets is urged as an objection to their use. This, time and experience will overcome, for it matters not how skillful the operator, the application of any new method will be found troublesome at first. Skill is the result of observation and experience. In this connection we will briefly review an essay on "cachets de pain," in the "American Journal of Pharmacy," vol. xlviii. No. 3, p. 100. The writer refers to them as "wafer discs found in the market under the name of cachets de pain." To be correct, the wafer discs are the material used in preparing cachets de pain (envelopes of bread). These, when enclosing medicines, are known as medicated cachets (cachets medicamenteux). The writer calls the method the "theory of the inventor," which is incorrect, for when a fact is demonstrable, as this is, it cannot be called a *theory*.

The writer's directions for preparing the cachets, and his mode of administration, deserve notice. The edges of each disc should not be moistened, as he recommends, but the marginal edges of *one* only, and that very slightly (experience is worth something at this point), and in taking the cachets, if properly moistened, no trouble is experienced in swallowing them. If properly prepared, they will not adhere to the press, nor to each other when placed in a box, as mentioned by the essayist; neither will they "cleave to the roof of the mouth" if properly

moistened. He mentions the time necessary for their preparation as being five times greater than that required for preparing pills and powders. Such has not been our experience, hence, we conclude from his remarks, that he is not skilled in the art of preparing cachets, and for fear that fallacious impressions may be made on the minds of those who have not examined the subject for themselves, we deem it expedient to controvert his statements.

The word *theory* is again used in his endeavor to condemn cachets de pain. In concluding the dissertation, in order to strengthen his objections, he observes: "This is not only my personal experience, but that of several physicians of this city, who, having submitted this method to fair trial, have arrived at the conclusion that cachets de pain are a failure."

We were the first to prepare cachets de pain in Baltimore, and at a period previous to their introduction in any of the Eastern cities; the press and wafers of Limousin only being used. They have been regularly dispensed since their introduction, and are highly esteemed by physicians. After a little trouble at first, no inconvenience has been experienced with them,—the time consumed in their preparation being very little more than that required for pills and powders; and accidents, such as recorded by the writer, we have never encountered.

We concluded to repeat the experiment of the writer with cachets containing effervescing salts. One cachet was prepared with a mixture of tartaric acid and bicarbonate of sodium, another with citric acid and carbonate of potassium. As usual, after joining the edges of the discs, they were quite dry in a few seconds. On being placed separately in water, they became perfectly flacid, but several cachets could have been swallowed before any sign of rupture or effervescence was noticed. The recommendation of Planten's jujube paste capsules, as a preferable means of administering medicines in a tasteless form (particularly if in powder), convinces us of the writer's lack of familiarity with this method. The capsules will not compare with the wafer discs in point of economy or convenience, nor can they be as expeditiously prepared. However, they answered an excellent purpose, until Limousin placed his unique press and concave wafer discs within the reach of pharmacists, and even now, may be preferred in a few cases. Therefore, we cannot conclude with the writer, that cachets de pain, of the kind we dispense, "will soon be referred to as a thing of the past," but, on the contrary, like many other innovations, strongly opposed at first, will in

time receive a most favorable notice, and be largely employed in dispensing the preparations of physicians.

Another method which meets with opposition, but promises to grow in favor, is the process of preparing compressed pills, for which a convenient and inexpensive machine has recently been placed within reach of the entire profession. No doubt, compressed pills will be of limited application, but for such substances as bicarbonate of sodium, bicarbonate of potassium, bisulphate of quinia, and the like, it is preferable to the old method. This form of pills is not new, as in England and the United States they have been known for many years, but heretofore they had been prepared exclusively by the few.

Lastly, though not least, of the methods in pharmacy, which may be termed modern, is the moulding of suppositories. These are not a new class of preparations. We have before us the Dispensary of Valerius Cordi, published in 1571, in which we find a formula for purgative suppositories, but from the very nature of the formula, we do not suppose them to have been the pretty things which are now called "suppositories," with due respect to those who prefer hand-made suppositories. We value the modern method of moulding as a great advancement in the art. Every pharmacist should endeavor to be supplied with the means of conducting his manipulations, according to the most approved *scientific and artistic methods*. Those who are not willing to incur the expense and inconvenience, should not throw obstacles in the way of progress. Who would be content to employ themselves in a shop furnished after the best model of the last century? No gas, no coal, no water, and destitute of a hundred other conveniences which science and art have brought to our aid. The old shop, with windows of bottled snakes, jars of rancid dog lard, snake oil, human fat and numerous other repulsive and unnecessary remedies, through the influence of science and art have been displaced by the modern palatial pharmacy, replete with chemical and pharmaceutical apparatus, and the introduction of new methods.

CACHETS DE PAIN.

BY WILLARD M. RICE, JR.

The use of these articles, comparatively new to American pharmacists, seems to be increasing to so great an extent, that I have thought a few practical notes on the subject would not be unacceptable to the

readers of the "Journal," although it has been so lately and so well treated of by others.

About the only possible objections to their universal introduction and use are those put forward by Mr. Lechler in the number for March last of this periodical, and as these objections have been successfully answered and refuted by Mr. Blair (April number), there is no need of further reference to them.

One objection to the general introduction of the use of cachets has hitherto been the cost of the press considered necessary for their preparation. I wish, therefore, to suggest a cheap, "home-made" apparatus, which, while it may not take the place of the more costly presses with those who may prefer and can afford them, will yet enable even the poorest in the ranks of our proverbially poor profession to possess a press, at a cost of only a few cents, which will turn out the cachets equal to the best.

I have prepared a great many cachets by the following-described machine:

A piece of hard wood, about six or eight inches long by four inches wide, serves for the base of the machine. In this fasten the lower dies (the brass buttons for stair-rods, as suggested by Mr. McIntyre, answer an admirable purpose, and can be had of exactly the proper sizes), one for each size of cachet. They should be sunk in the wood, so as to be on a level with the top. Similar dies are to be screwed to wooden handles, and the machine is complete. These handles, neatly turned, can be purchased at any hardware or house-furnishing store.

It will be seen that this machine differs from that figured in the "Journal" for January last, in having the upper dies attached to handles separate from the rest of the press. In using it, all that is necessary is to place an empty wafer on the die, place the medicine on it, cover it with another cachet, properly moistened, apply to this the upper die, and a very slight pressure upon this, or a tap with the handle of a spatula, is sufficient to cause them to adhere. In this way any number of complete cachets may be made in a very expeditious manner.

One word in regard to the proper moistening of the upper disk. There is no need of any complicated "wetter" for this purpose. A piece of flannel or muslin, wet and then wrung out, and folded two or three times, will be found to answer every purpose. Several of the disks may be laid upon this damp surface, to be taken up one by one

for the press, and they will be found to have absorbed sufficient moisture to make them adhesive, but none too much. My practice is to put them immediately from the press into a bottle, and I have never had to complain of too much moisture.

The polished brass dies are very easily kept clean, and the whole machine possesses the advantage of great simplicity, and will last for years, "with no expense for repairs."

The public are always ready to encourage legitimate enterprize, and in these days of elixirs, sugar pellets, &c., every pharmacist will find it conducive to his interests to introduce the cachets de pain to the notice of physicians and his customers.

I think the cachets may also be found useful for enveloping minute doses of liquid medicines, provided they exert no solvent action upon the envelope. I have never seen this suggested, but see no reason to doubt its practicability.

Philadelphia, April, 1876.

GLYCERIN AS AN EXCIPIENT FOR PILL MASSES.

BY LOUIS EMANUEL, PH. G.

(*From an Inaugural Essay.*)

As an excipient for pill masses, glycerin has been recommended in combination with starch or tragacanth for pills generally, and without any combination for pills of quinia and other chemicals. The latter was suggested by Dr. T. E. Jenkins in the "*Amer. Journ. Pharm.*," 1869, p. 119. However, little or nothing has been said of its advantageous use as an excipient for pills generally. I have used it in compounding prescriptions for the last three years, and now am confident of its superior properties, and feel safe to recommend its use by every pharmacist whenever it is applicable. I prefer to use it without any intermixture, for it answers all purposes and is more convenient to use; being a liquid, it can be dropped from a vial, which is done with greater rapidity, accuracy and cleanliness than if combined with starch or tragacanth, which combinations being semi-fluids would have to be used with a spatula, and if the requisite quantity be known, would have to be weighed. Syrup of acacia is most frequently used, over which glycerin has two important advantages. Pills made with syrup of acacia are all larger, and, if kept for a while, become very hard, while

those made with glycerin never become perfectly hard, although they are firm and retain their shape, and, when held between the fingers for a while, and worked, they become very pliable. The amount of syrup of acacia necessary is invariably larger than that of glycerin, as will be seen by the following formulas ; though trifling in some, the difference is sufficient to show that more syrup is required :

R	Acid. tannici, Glycerinæ, (or syrup. acaciæ, M. ft. pil., No. viii.	gr. xvi gtt. iii gtt. iv)	R	Acid tannici, Pulv. opii, Glycerinæ, (or syrupi acaciæ, M. ft. pil., No. v.	gr. xv gr. iii gtt. ii gtt. v)
R	Pulv. opii, Pulv. camphoræ, Acid. tannici, Glycerinæ, (or syrup. acaciæ, M. ft. pil., No. x.	gr. v gr. x gr. xxv gtt. v gtt. x)	R	Pulv. opii, Pulv. plumbi acet., Glycerinæ, (or syrup. acaciæ, M. ft. pil., No. xvi.	gr. viii gr. xl gtt. i gtt. ii)

R	Aloes socot., Ferri sulph. exsic., Glycerinæ (containing 10 per cent. of alcohol) (or syrup. acaciæ,	ad gr. xii gtt. ii gtt. vi
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If glycerin alone is used with these substances, the mass will be apparently adhesive, but upon rolling, it will crumble, and cannot be formed into pills ; this difficulty is overcome by the small quantity of alcohol.

R	Quiniæ sulph. Ext. colocynth. co., Pulv. capsici, Glycerinæ, M. ft. pil., No. xxiv. gr. xxiv gr. xviii gr. xii gtt. v (or syr. acac., gtt xii)
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The quantity of glycerin in this formula seems insufficient, but upon working with considerable pressure, it will be found to be just enough to form a very good mass.

R	Quiniæ sulph., Pulv. capsici, Glycerinæ, gr. xxiv gr. xviii gtt. xii (or syr. acac., gtt. xii)
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The quantity of glycerin required in this one seems quite large when compared with the one just before it, which is due to the absence of an adhesive substance; for if two grains of powdered acacia be added, only eight drops are required.

R
Quinæ sulph., gr. xxx
Ferri. sulph. exsic., gr. xv
Strychniæ sulph., gr. i
Glycerinæ, gtt. xii (or syr. acac., gtt. xv)
M. ft. pil., No. xxx.

First rub the sulph. strychnia with a drop of water, add the other ingredients and mix the whole thoroughly together; then add the glycerin, and triturate briskly until an even mass is formed, which divide into pills as quickly as possible. When done slowly, the mass becomes very brittle, and cannot be rolled out. In the above formula I first noticed the great advantage of knowing the exact quantity of this excipient for forming a mass, for which purpose eighteen drops may be added on a slow operation.

I have a list of formulas similar to the above always within reach at the dispensing counter, to which I can refer to ascertain the amount of glycerin necessary to form a mass, and also write the amount used on the prescription. The glycerin is best dropped by means of a glass tube drawn out at one end to an aperture of $\frac{1}{8}$ inch (or by means of the apparatus figured on page 99 of this volume).

EFFERVESCENT PREPARATION OF SODIUM TARTRATE.

BY HENRY T. HAYHURST, PH.G.

(From an Inaugural Essay.)

Within a few years past, an effervescing solution of sodium tartrate¹ has been slowly gaining confidence among physicians as an active cathartic and purge, superior to solution of magnesium citrate, among the people as a cooling beverage and agreeable cathartic, and among pharmacists as an elegant, permanent and profitable preparation. Its superiority over solution of magnesium citrate lies principally in the following qualities: It does not debilitate the bowels, and leave them in a weakened condition. It does not produce tenesmus, and therefore can be used with much less pain, as a purge, where hemorrhoids are

¹ See "American Journal of Pharmacy," 1873, p. 289.

present, than the magnesia solution. It is a permanent solution, and does not precipitate nor become cloudy, after a few days, as the magnesia solution frequently does. It is as palatable and pharmaceutically elegant as the magnesia solution, superior to it in medicinal value, and of much more profit to the pharmacist in manufacturing.

The formula which I have ascertained to give the most stable product and gratifying results is the following, viz :

Take of sodium carbonate,	3i 3ii
acid tartaric, in crystals,	3vi
oil of lemon,	gtt. iii
simple syrup,	f3iss
pure water,	q. s. ft. f3xii

The operation is as follows : reduce the sodium carbonate to powder, rub the oil of lemon intimately with it, and then add water sufficient to dissolve ; to this solution add five drachms of the tartaric acid, and stir occasionally till the acid is dissolved. Filter this solution to remove any impurities which may be present, or any cloudiness resulting from the introduction of the oil of lemon. To this filtrate add the syrup, agitate thoroughly, then add one drachm of tartaric acid (the remaining amount), cork and tie immediately to preserve the carbonic acid gas ; finally, agitate the contents of the bottle occasionally till the acid is all dissolved, and keep in a cool place cork downwards.

The reasons for using the acid in crystals for producing the tartrate, are these : The commercial powdered acid usually contains impurities, and sometimes adulterations, not present in the crystals ; to powder them previously to adding to the alkaline solution would be an unnecessary occupation ; finally the reaction is performed much slower and more regularly than where the powdered acid is used, an object, I think, greatly to be desired in processes evolving much carbonic acid gas. The last portion of the acid could be added by dissolving it first in the syrup and adding this solution, but in doing this the reaction is severe and instantaneous, so that much gas is often lost, while with the crystals the reaction is moderate, and sufficient time is given for inserting the cork, and for the gas to dissolve in the liquid.

Prepared in this manner, effervescing solution of sodium tartrate is a very agreeable beverage, and can be preserved unimpaired for most any length of time, samples having been kept through the hot months uninjured.

I have found such a wide difference in samples of sodium carbonate,

obtained from different establishments, in regard to purity, efflorescence and amount of water of crystallization, that I have purified and recrystallized this salt, much to my satisfaction, and it will fully repay pharmacists to adopt the following plan :

Dissolve the large crystals of common sal soda in pure water, allow all the insoluble impurities to subside, filter this solution and evaporate at a moderate heat till a pellicle forms over the surface of the liquid, and set aside for two or three days to crystallize. A small proportion of mother liquor remains, which, if sufficiently pure, may be still farther evaporated and crystallized, if desired. These crystals should now be dried on a linen strainer in a moderately warm air-chamber, much care being necessary in this operation, as the crystals effloresce readily in the atmosphere, and too much heat will easily liquify the salt again. This process yields beautiful, clear, oblique-rhombic, prismatic crystals, which should be preserved in well-stopped jars. It may contain some sodium chloride and sulphate, which, however, if in minute quantity only, do not detract from its medicinal value.

An effervescing granular salt of sodium tartrate may be formed by heating, on a sand bath, anhydrous sodium carbonate and pure powdered tartaric acid, in the proportion of three parts of the alkali to four and a quarter of the acid. Care must be taken to do this in a vessel not affected, chemically, by tartaric acid, and to keep the chemicals well stirred and scraped up from the bottom, or they will become yellow and carbonized. This gives an agreeable, slightly acid salt, very soluble in water, which solution effervesces briskly, and forms a convenient and pleasant cathartic and cooling drink. This preparation keeps well and does not attract moisture, as do many effervescing granular salts.

For a cooling drink the solution may be taken in tablespoonful doses hourly, as a mild cathartic one half a bottleful and for a brisk purge a whole bottleful. The granular salt may be taken in teaspoonful or tablespoonful doses, dissolved in sweetened water.

THE EFFECT OF LIGHT ON SYRUP OF THE IODIDE OF IRON.

BY CLEMMONS PARRISH, PH.G.

My attention was called, in making syrup iodide of iron, U. S. P., to a change occurring in the same lot under different circumstances. The syrup was made in accordance with the officinal process, care

being taken to follow out minutely the "Pharmacopœia" directions as to temperature, &c. The result convinced me that the effect of light on the preparation has little or nothing to do with the chemical change resulting in the discoloration so often seen in this syrup, but is the result of atmospheric change in the bottle, caused by careless stopping or defective corks.

From the syrup six one-ounce vials were filled; three of these were corked; three were glass-stoppered vials, in one of which the stopper was coated with paraffin. The syrup in two of the corked bottles retained the desired appearance. The portion in the glass-stoppered vials met with a change in one instance; the stopper coated with paraffin and another fitting securely, remaining unchanged. These bottles were all placed in a window, exposed during the greater part of the day more or less directly to the sun's rays, remaining in this state for about one month.

I have found that the addition of either phosphoric or citric acid, as suggested by Mr. Thos. B. Groves (*"Am. Jour. Phar.,"* 1868, page 265), to be of great benefit in preserving the syrup from atmospheric action, resulting in altered properties and unsightly appearance.

Philadelphia, March 25, 1876.

NOTE BY THE EDITOR.—That the discoloration of syrup of ferrous iodide is due to the oxidizing influence of the atmosphere, and not to light, has been repeatedly discussed in this Journal since 1854.

TINCTURA FERRI CHLORIDI.

BY ISAAC R. DILLER, PH.G.

(*From an Inaugural Essay.*)

The specific gravity of this tincture is .990, and each fluidounce should yield, when treated with ammonia water in excess, precipitate of ferric oxide, weighing, after washing, drying and igniting, 28.8 grains. Each fluidounce should also contain 39.5 grains of anhydrous hydrochloric acid. It should give no dark coloration on addition of a crystal of ferrous sulphate and sulphuric acid (absence of nitric acid), and no blue precipitate with potassic ferridcyanide (absence of ferrous salt). To see how near the tinctures kept in the shops might coincide with these figures in regard to amount of ferric oxide and anhydrous acid contained in them, and, also their action with the officinal tests given

to ascertain their freedom from or the presence of the various impurities to which it is most liable, several samples, from some of the leading pharmacists of this city, were examined, with the following results :

No. of Sample.	Amount of Ferric Oxide to f $\frac{3}{4}$ i.	Anhydrous Hydrochloric Acid to f $\frac{3}{4}$ i.	Nitric Acid.	Ferrous Oxide.	Precipitate formed on standing.
1	22.6 grs.	35.2 grs.	Absent	Absent	None
2	27.4 "	40.3 "	Present	"	Slight
3	28.7 "	35.7 "	Absent	"	None
4	26.9 "	33.8 "	"	"	"
5	28.9 "	44.8 "	"	Trace	"
6	17.5 "	30.1 "	"	Considerable	Slight
7	32.2 "	37.0 "	Trace	Absent	None
8	30.7 "	46.3 "	"	"	Considerable
9	27.9 "	35.4 "	"	"	None
10	23.4 "	34.9 "	Absent	"	"

From the above table it will be seen that the samples examined do not vary very greatly in regard to ferric strength, except in one case, while in two samples the ferric strength exceeded the officinal standard. The difference in the color of the samples was quite noticeable, varying from pale lemon to rich brownish-orange, the depth of shade varying with the proportion of the iron and the amount of acid. According to the present process, there is no excuse for any great deficiency in strength, as by further addition of the liquor it can readily be brought up to the standard, if from any cause the liquor should be wanting in that direction.

A SINGULAR REACTION.

BY JOSEPH P. REMINGTON, PH.G.

(Read at the Pharmaceutical Meeting, April 18th.)

The following prescription was sent to Prof. J. M. Maisch by Jos. W. Hall, of Nashville, Tenn., who states in his letter that he noticed a reaction of a very singular nature take place when the various ingredients were mixed together; when first prepared the color being a dark-red, but changing in a few hours to a beautiful dark-green. It is as follows:

R		
	Syrup. pruni virg.,	f3ii
	Syrup. tolu.,	
	Syrup. scillæ,	aa f3i
	Tinct. lobeliæ,	
	Spt. æther. nitrosi,	aa f3ii
	Morphiæ sulph.,	gr. i
	M. ft. solut. Sig., a teaspoonful.	

The writer was requested to look into the subject, and this was done with considerable interest as one point after another was developed.

1st. The prescription was compounded as given above, when the effect of the change in color was distinctly observed, as noticed by Mr. Hall.

2d. The various ingredients were put together without the syrup of wild cherry. No change in color was discovered on standing twenty-four hours.

3d. All of the ingredients were mixed together, leaving out syrup of tolu. The change in color takes place on standing; the mixture darkens and assumes a green tint.

4th. In this, syrup of squill was omitted—all of the other ingredients combined. The liquid becomes darker red, but does not change to green.

5th. Tincture of lobelia was left out in this experiment. The change took place readily, the mixture becoming quite as green as in No. 1.

6th. All of the ingredients were mixed together except the spirit of nitrous ether. The reaction did not take place—but little change was noticed.

7th. Sulphate of morphia was omitted. The change in this case very decided. The mixture assumes a dark green color.

These results pointed to the fact that syrup of wild-cherry, spirit of nitrous ether and syrup of squill were alone concerned in the reaction, with little if any interference on the part of tincture of lobelia.

Spirit of nitrous ether and syrup of wild-cherry, when mixed together, acquired a greater depth of color, but did not become green. When syrup of squill was added, however, the green tint began to develop, and when allowed to stand as long as in No. 1, the shade was nearly the same.

From the peculiar coloration and its method of development, the

presence of iron in minute quantity was suspected in the syrup of squill and spirit of nitrous ether; and, on applying the tests for this metal to the two preparations, as obtained from various sources, distinct evidences of a *minute* quantity of iron were obtained.

In order to show with what ease this contamination (it can hardly be called an adulteration) creeps into the preparation of spirit of nitrous ether, a small quantity was placed in a glass vessel and stirred for a few moments with an iron spatula, when a drop or two of solution of ferrocyanide of potassium was added—a characteristic blue precipitate resulted. The explanation is simple, sufficient acid being usually present in spirit of nitrous ether to act upon the metal and form a soluble salt. When a partly-worn tinned iron measure is used by the manufacturer or wholesale dealer in measuring this preparation (as is often the case), a trace of this metal would surely be left in it, particularly if the liquid was allowed to stand in the measure any time. Commercial acetic acid, and even some of the finer grades, were found to contain slight traces of iron; and hence, in syrup of squill, we have the metal present in minute quantity.

Now, why does the green coloration appear? Wild-cherry bark contains tannic and gallic acid, and these give, with small quantities of an iron salt, a dark-green coloration in the presence of an acid like acetic.

In order to show that the tannic and gallic acids were concerned in producing the color, an infusion of wild-cherry was prepared carefully, by the U. S. P. formula, to which was added spirit of nitrous ether and syrup of squill in the same proportion as in the prescription. The same play of colors took place; first, a deepening of the red, then gradually changing, until the dark-green appeared. The subsequent addition of a trace of iron still further deepened the coloration.

Part of the same infusion was deprived of tannic acid by shaking it with hydrated sesquioxide of iron, until a small portion of the filtrate failed to give a coloration with a weak solution of an iron salt. When to this infusion the same proportion of spirit of nitrous ether and syrup of squill was added, as in the prescription, no change in color was observed, even after standing.

The presence of a slight excess of acid favors the formation of the green coloration; and when an alkaline solution is added, the green coloration disappears, and a slight precipitation takes place.

The examination of this subject furnishes another illustration of the necessity for the most scrupulous care, not only in making preparations, but in guarding them from contamination after they are made. Although in this particular case, practically, no harm could possibly result from the presence of the trace of iron, yet we see in it a cause for annoyance, and the prescription would very likely be returned by the patient with suspicions of an error in compounding.

UVA URSI AND SPIRIT OF NITRE.

BY M. S. BIDWELL, ELMIRA, N. Y.

(*Read at the Pharmaceutical Meeting April 18.*)

Two communications have recently appeared in the "Druggists' Circular," asserting that sweet spirit of nitre and fluid extract of uva ursi would form, in some cases, an explosive mixture. Other ingredients were mentioned—syrup in the one case and fluid extract of buchu in the other, but the two former were supposed to be the dangerous agents. As every pharmacist has frequent occasion to mix these ingredients, and no disturbance has ever before been made public, I was skeptical as to the reality of the startling phenomenon, and paid no attention to the first statement, but on the appearance of the second, proceeded to the following simple experiments, which any one can verify:

1. Fluid extract of uva ursi, of my own make, about twenty months old; sweet spirit of nitre, also of my own make, about a month old, and kept standing on crystals of potassium bicarbonate, to prevent any acidity. Two drachms of each were mixed, with no perceptible action of any kind.

2. Fluid extract, made by Squibb, several years old; spirit of nitre, as above, and result the same.

3. To each of these mixtures was added about one drachm of dilute nitric acid, U. S. P.; a decided effervescence at once occurred, the surface of the liquid being nearly covered with minute bubbles, with a decidedly nitrous odor. The reaction continued perhaps ten minutes, and would very likely have been more energetic in a larger quantity of the materials.

It seems fair to conclude, therefore, that the liquids mentioned will not produce any disturbance if the spirit of nitre is in good condition;

but that if it is old and strongly acid, effervescence will be produced which, if the ingredients are in considerable quantity and in a closed bottle, might amount to an explosion. As to the chemical reaction, I can offer no suggestion.

SIMPLE CERATE AND OINTMENTS IN GENERAL.

BY HANS M. WILDER.

The pharmacopœia (and all works on pharmacy) tells us, after having melted and strained (if necessary) the cerate, to "stir constantly until cool."

This method serves a good purpose for simple cerate, and may be used for nearly all ointments.

For some time past I have been using a method recommended to me, years ago, by an old apothecary (and said to be employed by perfumers in making pomatum), which consists in letting the melted mass cool down undisturbed, and, when *perfectly cold*, with a pestle gradually work your way from the top (by rubbing) down and through the mass. The ointment treated in this way is softer, never gets hard on its surface, and, as asserted by physicians, is more quickly absorbed by the skin than when made by "stirring constantly till cool;" which injunction, by the way, seldom is complied with.

There will, of course, be raised one great objection to this method; with lots of more than a couple of pounds it becomes rather a hard task to move the pestle round at last.

EXTRACTUM PRUNI VIRGINIANÆ FLUIDUM.

BY ISAAC W. SMITH, PH.G.

Having experienced great difficulty in obtaining a satisfactory fluid extract of wild cherry bark, it occurred to me that a modification of the officinal process might with advantage be adopted, to obviate the difficulty, and herewith I present the following formula, which yields an extract superior in its sensible properties to that of the "Pharmacopœia":

Take of Wild cherry bark, in coarse powder,	64 oz. (troy)
Water,	2 pints
Glycerin,	1 pint
Alcohol, 95 per cent.,	sufficient quantity
Sweet almonds, blanched,	8 oz. (av.)

Mix glycerin and water, moisten the bark with 2 pints of the mixture, allow it to stand in a closely covered vessel for four days, then pack in a conical glass percolator and pour on the remainder of the mixture; when this has disappeared from the surface, gradually pour on the alcohol until 48 fluidounces have been obtained, and set this portion aside. Continue the percolation with the alcohol until 80 fluidounces more have been obtained. Evaporate this by means of a water-bath to 16 fluidounces; allow it to cool. The almonds having been reduced to a smooth paste, mix this last portion with them and add to the first portion reserved, in a closely stopped bottle, and agitate the whole together. Allow it to remain in contact for 48 hours, with frequent agitation; then prepare some paper pulp, and place in a filter in a glass funnel, adding the mixture gradually to the pulp, stirring upon each addition, so as to get the mixture thoroughly incorporated with the pulp, observing to keep the funnel closely covered during the process—the result being an extract of a brilliant reddish-brown color, possessing all the virtues of the bark in a very marked degree.

GLEANINGS FROM THE FOREIGN JOURNALS.

BY THE EDITOR.

Combination of sulphate of quinia with phenol.—Mr. S. Contot has noticed, some time ago (*Lyon méd.* XIX. 480 and 666), the existence of such a compound, and now gives a fuller account, from which we take the following:

A solution of carbolic acid, in an equal weight of 80 to 93 per cent. alcohol, is added to a saturated alcoholic solution of quinia sulphate; in a short time the new compound will commence to crystallize in wart-like masses. It is also obtained by adding to an alcoholic solution of carbolic acid and quinia some sulphuric acid. The names of *carbolated (phenated) sulphate of quinia*, or *sulphate of phenol-quinia* are suggested to distinguish it from the sulpho-phenate of quinia. It crystallizes from water in star-like groups composed of short needles, has neither the odor nor the caustic properties of phenol, after having been washed with ether and recrystallized, and by the action of chlorine water and ammonia, barium chloride, and concentrated nitric acid, followed by ammonia, indicates the presence of quinia, sulphuric acid and phenol, in the latter case by the color of ammonium picrate; but neither hypochlorites, bromine or hypobromites indicate the pres-

ence of phenol, nor is the quinia salt affected by ammonia, in certain proportions. The salt, which possesses considerable antiseptic properties, has the formula $C_{20}H_{24}N_2O_{23}SO_3 \cdot C_{20}H_{24}N_2O_{23}C_6H_5O + 7H_2O$, the water is given off at a temperature of $150^\circ C$ ($302^\circ F.$). It is more soluble in water than quinia sulphate, but almost insoluble therein in the presence of free phenol; sulphuric acid renders the salt very soluble without separating phenol, but diminishes the fluorescence considerably.

The insolubility of sulphate of phenol-quinia may serve to separate this alkaloid from cinchonia, the sulphate of which does not produce an insoluble compound with carbolic acid.—*L'Union Phar.*, 1876, pp. 75-78.

To color arsenic for ordinary sales as a rat's bane, Grimaud of Poitiers proposes to mix 98 parts of arsenious acid, and one part each of ferrous sulphate and potassium ferrocyanide, all in the state of fine powder. The mixture assumes a light blue color and is said to possess an odor of bitter almonds, without interfering with the poisonous properties of the arsenic.—*Bull. Comm. de l'Union Phar.*, 1876, 16.

Fowler's Solution.—Having observed a gradual deposition of arsenious acid, Mr. Ch. Ménière kept 100 grams of this preparation for three years, and then collected from it 15 centigrams of arsenious acid, which had been deposited in the form of needles upon the separated volatile oil.—*Rép. de Phar.*, 1876, 65.

Quinia in Hypodermic Injections.—S. Limousin has found that the acid hydrobromate of quinia has the composition $C_{20}H_{24}H_2O_{23} \cdot 2HBr \cdot 3H_2O$, and is soluble in 9 parts of water at $15^\circ C$ ($59^\circ F.$). The neutral salt $C_{20}H_{24}H_2O_{23} \cdot HBr \cdot H_2O$ is less soluble than the ordinary quinia sulphate. The corresponding sulphovates, however, which the author proposed for use in hypodermic injections in 1873, contain about the same amount of quinia as the corresponding hydrobromates (75 to 76 per cent. quinia in the neutral, and 56 to 60 per cent. in the acid salt); but they are more soluble than the latter, which, however, are preferable in all such cases, where the effects of bromine are likewise needed.—*Ibid.*, 113, 115.

Salicylic Acid in Solutions for Hypodermic Injections.—S. Limousin has observed that a solution of 0.20 grams of morphia hydrochlorate in 10 grams of distilled water, was spoiled in three weeks with the separation

of numerous crystals and slimy flocks, while a solution of the same strength remained clear and limpid after the addition of 2 centigrams of salicylic acid, which the author regards as superior to the various agents previously recommended for the same purpose. Salicylate of morphia, requiring about 150 parts of water for solution, is not adapted for hypodermic injections.—*Ibid.*, 129.

Sodium Copaivate is prepared according, to L. Géza, by distilling copaiva balsam with water to remove the volatile oil and purifying the resulting resin by repeated solution in rectified petroleum and strong alcohol. The crystallized copaivic acid is then combined with soda. This compound has been successfully tried by Dr. Zlamál, in the form of pills made by using 2 parts of sodium copaivate with 1 part of dextrin and aromatising with oil of sandal wood.—*Phar. Post.*, 1876, No. 6.

Chlorinated Lime and Glycerin.—In preparing an ointment composed of 10 grams of the former and 30 grams of the latter, Schiedmeyr triturated the dry chlorinated lime with about its own weight of glycerin, when heat and a yellowish-brown gas, having a penetrating, but not disagreeable odor, was evolved, and a hard, brown mass was left in the mortar. If all the glycerin was added at once, a similar effect was produced, except that the mass had the consistency of an ointment. By using moist chlorinated lime, the brown compound is not formed, and the ointment retains the odor of chlorine. Chlorinated lime should therefore be first triturated with water before the glycerin is added.—*Zeitschr. Oest. Apoth. Ver.*, 1876, No. 9.

Syrupus ferri lactophosphatis.—C. Jehl dissolves 50 grams of ferrous sulphate and 150 grams sodium phosphate, each separately, in 750 grams of water, mixes the solutions, washes the precipitate rapidly, and dissolves it in 60 grams of concentrated lactic acid; sufficient water is now added to make the weight of the solution 1,882 grams, and the syrup made with the addition of 3,586 grams of sugar. The syrup may be flavored with 50 grams of spirit of lemon. Twenty grams of the syrup contain 0.1 gram of ferrous phosphate.

Syrupus ferri et calcii lactophosphatis.—The same author prepares a solution of ferrous phosphate from 9.25 grams of ferrous sulphate and 27.75 grams of phosphate of sodium, in 11 grams of concentrated lactic acid; also, a solution of 13.3 grams of phosphate of calcium in 24 grams of the lactic acid and 100 of water. The two solutions are

mixed, sufficient water added to make 388 grams, and the syrup finished by the addition of 625 grams of sugar and 15 grs. of spirit of lemon. Twenty grams of the syrup contain 0.2 phosphate of calcium and 0.1 of ferrous phosphate.—*Schweiz. Woch. f. Phar.*, 1876, No. 7.

Indelible Ink.—200 grams tartaric acid are dissolved in 1 litre of hot water; in one-half of the solution dissolve 100 grams of oily anilin; add the other half, and then 100 grams of chlorate of potassium. Allow the solution to cool and subside until next day; filter from the bitartrate, and bring the liquid to the density of 7° B. Thicken sufficiently with gum arabic, and add to each litre 20 grams of copper sulphate, dissolved in little water. This ink may be at once used for printing muslin and other fabrics, upon which the black color will be perfectly developed by bleaching liquids. Chlorate of copper is also used for writing upon zinc used for signs and labels exposed to the weather.—*Ibid.*, No. 10.

Liquid Glue.—One part of phosphoric acid, specific gravity 1.120, diluted with 2 parts of water, is nearly neutralized with ammonium carbonate, one part of water added, and then, in a porcelain vessel, sufficient glue dissolved in the liquid to obtain a syrupy consistence. It must be kept in well-closed bottles. The addition of glycerin or sugar would cause the glue to gelatinize.—*Chem. Centralbl.*, 1876, No. 6.

To prevent the cracking of glue by heat or extreme dryness, the addition to the solution of some calcium chloride is recommended, which retains sufficient moisture to obviate this inconvenience. Thus prepared, glue can also be used upon glass and metallic surfaces.—*Ibid.*, No. 9.

Waterproof varnish for paper, &c., is obtained by precipitating a solution of tallow or resin soap by aluminum, iron or copper sulphate, and dissolving the precipitate in a liquid hydrocarbon, or in carbon bisulphide.—*Ibid.*, No. 8.

The estimation of tannin, by Carpane's method, has been modified by J. Barbieri as follows, whereby correct results are obtained: The tannin solution is precipitated by an excess of an ammoniacal solution of zinc acetate, the entire mixture heated to boiling, evaporated to two thirds, and filtered after cooling; the precipitate is dissolved in diluted sulphuric acid, filtered, if necessary, and then titrated with solution of potassium permanganate, which has been previously titrated with commercial tannin. The results are said to be exact.—*Apoth. Zeitung*, 1876, No. 8, from *Ber. d. d. Chem. Ges.*

SELECTIONS FROM THE DANISH JOURNALS.

BY HANS M. WILDER.

Telegraphy by means of Tuning-Forks.—P. la Cour (Denmark) has invented a new telegraph apparatus (June, 1874),¹ which bids fair to play an important rôle at no distant future. It is based on the fact that when a tuning-fork, by its vibrations, closes and opens an electrical circuit, another tuning-fork, connected with it by the wire—provided it have the same pitch—will be made to vibrate. Any number of differently pitched tuning-forks may be connected with others by the same single wire, and only the corresponding ones (the isochronous) can be made to vibrate.

The practicability of the above method of telegraphing was demonstrated on the wire between Copenhagen and Fredericia (390 kilometers, about 250 miles). (The description of the instrument, the advantages accruing from its use and the detailed experiments will be found in "Ann. de Chim. et de Phys.," 1875, p. 284).—*Arch. for Ph.*, 1875, p. 466.

A New Kind of Spontaneous Combustion.—"Pharm. Centralk.," 1875, No. 25, reports a case of spontaneous combustion arising in a box of chipped logwood, which probably had been packed in a moist state.—*Ibid.*, p. 480.

Arsenic.—Prof. Binz, in Bonn, calls, again, attention to Bettendorff's test (see "Amer. Jour. Phar.," 1871 (xliii), p. 222) for arsenic, as the easiest for the physician. Put a piece of the suspected substance in a test-tube, pour over it concentrated muriatic acid, add a few crystals of protochloride of tin, and heat; arsenic, if present, will be reduced, and thrown down as a dark-brown powder.—*Ibid.*, p. 483.

Caoutchouc in Affections of the Lungs.—Electuary of caoutchouc has again been recommended in phthisis, etc., by Drs. Varick and Calver. Dissolve, by maceration, 30 grams finely cut caoutchouc in 60 grams oil of turpentine; strain, and mix 7½ grams with 45 grams of sugar and 75 grams of honey. One teaspoonful of this electuary contains about 0.12 gram of caoutchouc. It is said to prevent night-sweats, blood-spitting and emaciation.—*Ibid.*, p. 495, from *Pharm. Centralk.*, 1875, No. 41.

Infants' Food.—Dr. H. Muller has examined into the quality of the different kinds of food for infants, and came to the following results: *Liebig's food* is somewhat difficult and tedious of preparation, so that, as a rule, the soup is seldom properly made. The different modifications that exist are much more easy to use, but they do not keep as well, and do not taste as agreeable as the original food. One serious objection is found to *Liebig's food*—its exclusive use predisposes children to rachitis, since it does not contain sufficient *bone food*.

Nestlé's mother's milk and (still more, a modification of it) *Faust and Schuster's Göttingen infant meal*, Dr. M. considers the best substitute for mother's milk. It contains in 100 parts: 11.51 protein substances, 79.61 carbohydrates, 1.80 inorganic

¹ The same or a similar apparatus has recently been on exhibition at the Franklin Institute, in Philadelphia.—EDITOR AMER. JOUR. PHAR.

salts, 6.73 water (von Uslar and Polstorff). The inorganic salts contain in 100 parts: 31.70 phosphoric acid, 29.78 potash (Freitag).—*Ibid.*, 1876, p. 12.

Restoration of Faded Writing.—Moisten the paper a little with water, and brush over it a solution of sulphydric ammonia. Since most inks contain iron, it is easy to understand that there will be formed sulphide of iron, which is black.—*Ibid.*, p. 22, from *Industrie-Bl.*

Arsenical Poisoning.—Scolosuboff has found that, both in slow and rapid poisoning, the arsenic accumulates chiefly in the brain, spinal marrow and the nerves. On the contrary, comparatively little will be found in the liver and muscles generally. A dog had, in thirty-four days, taken, in increasing doses, from 5 mgrms. to 15 cgrms. arsenious acid. On examination, was found:

In 100 grams,	muscles,	0.00015 grams.
"	liver,	0.00271 "
"	brain,	0.00885 "
"	spinal marrow,	0.00932 "

or 1 : 10.8 : 36.5 : 37.3.—*Ibid.*, p. 24, from *Pharm. Centralh.*, 1875, No. 45.

Dita Bark.—("Am. Jour. Phar.," 1873 (xlv), p. 316) Jobst and Hesse have examined this bark (from *Echites scholaris*, L.; *Alstonia scholaris*, Brown), and reported their results at some length in "Ann. d. Ch. und Ph.," vol. 178. After a description of it, they mention ditaïn obtained by Gruppe in Manilla, and then detail their chemical investigation. The following new alkaloids, acids, etc., are found by them: Ditamin, echicauchin, echicerin, echicerinic acid, echiteïn, echiretin.—*Ibid.*, p. 27, from *Pharm. Centralh.*, 1875, No. 49.

Action of Borax as an Antiseptic.—Dumas and Schnezler state that they have found that borax coagulates the protoplasm of the cells, and in this way kills lower organisms; it becomes, then, easy to understand how it can act as an antiseptic.—*Ibid.*, p. 30, from *Ann. d. Ch. et d. Phys.*, 1875, p. 543.

Pharmacy in Denmark.—The Royal Board of Health, in reply to numerous petitions about permission to start new pharmacies, expresses its conviction that the public will undoubtedly be benefitted by competition even of drug stores, under certain restrictions, and with due regard to existing regulations about surveillance, etc.

It has been resolved to revise the existing poison-law, particularly with respect to the manifold uses active poisons of late years have been put to, both in manufactures and in the household.—*Ibid.*, p. 39, etc.

CENTENNIAL EXHIBITION !

The Philadelphia College of Pharmacy will open their rooms for the convenience of visitors on the 8th of May. An Actuary, speaking English, French and German will be in attendance, between the hours of 9 A. M. and 6 P. M., to give such information as may be desirable to strangers visiting Philadelphia.

COMMITTEE ON RECEPTION.

MINUTES OF THE COLLEGE.

PHILADELPHIA, March 27th, 1876.

The annual meeting of the Philadelphia College of Pharmacy was held this day at the Hall of the College, No. 145 North Tenth street.

The President, Dillwyn Parrish, occupied the chair, and twenty members were present.

The minutes of the meeting of December, 1875, were read and, on motion, adopted.

The minutes of the Board of Trustees since the College meeting in December were also read by the Secretary of the Board, William C. Bakes, and, on motion, adopted.

The annual report of the Librarian was read by him, and, on motion, accepted.

The Librarian respectfully reports that since last report he has bound the theses of the class that was graduated in the Spring of 1875.

There are now fifty volumes of these in the Library.

During the past year the arrangement of the entire Library has been completed, each book ticketed and numbered, and a new registration of the books has been made; the books are arranged in five classes, to wit:

	Vols.
Class A—Encyclopædias, Public Documents and Reports.....	344
Class B—Chemistry.....	220
Class C—Pharmacopœias, Dispensatories, Formularies, Materia Medica, Pharmacy, Botany.....	255
Class D—Miscellaneous.....	313
Class E and F—Serial publications.....	1131

There have been added during the past year about sixty volumes, many of them being exchanges made with the "Journal of Pharmacy," and of a character suitable for our Library, while in other instances a number of volumes have been purchased to complete sets which were in part already on our shelves.

Our Library now comprises about twenty-three hundred volumes, not counting duplicates; several works we have in a number of editions, but the committee would be glad if any of the members can furnish some of the older editions of the United States Dispensatory, there being only three of the thirteen editions issued now catalogued by us.

The arrangement alluded to in the early part of this report will enable any one to ascertain whether any treatise upon a particular subject is in our Library with but little trouble, and it is hoped that the labor which has been bestowed upon the Library will be found conducive to the advantage of those of our members who may require to consult the volumes.

THOS. S. WIEGAND, *Librarian*.

March 27, 1876.

Wm. B. Webb alluded to the labors of the Librarian, and recognized the value of his services in that department. He hoped that gentlemen would express their appreciation of the work performed. Several members joined in this opinion, and a general recognition of the value of his services was expressed.

Professor Remington, Curator, offered the following report, which was read and accepted:

The Curator would report progress in the work of refitting and adding to the cabinet. Although much still remains to be accomplished, it is confidently hoped that in a few months it will be in a presentable condition.

The thanks of the College are due to Powers & Weightman for their liberal offer to refit the chemical cases, and to Hance Brothers & White for their gift of many valuable specimens of indigenous drugs, and to Messrs. Webber, Taylor and Holden, members of the class of 1876, for their assistance in arranging the specimens in the bottles.

JOSEPH P. REMINGTON, *Curator*.

March 27, 1876.

The Committee on Publication, through Professor Maisch, presented the following report of their labors during the past year, showing a very satisfactory result. The report was accepted.

To the Philadelphia College of Pharmacy:

The Publishing Committee respectfully report that they have attended to the various duties incumbent upon them, as will be seen from the annexed reports. From the Editor's report it will be seen that the number of original essays published in the "Journal" during the twelve months was ninety-six, of which number ten were abstracts from theses. The number of original papers considerably exceeds that of former years, and the committee bespeak for the "Journal" a continuance of this gratifying interest on the part of its readers, and more particularly of the members of this College. At the Pharmaceutical Meetings twenty papers were read, and the request made last year is herewith renewed, that the members not only endeavor to make it convenient to attend these meetings, but likewise that, if possible, they give notice beforehand to the Registrar of such subjects which they may intend to bring forward for discussion. Such previously given notice has invariably resulted in a full attendance and participation in the discussions.

The financial affairs of the "Journal" may be called satisfactory. For further particulars the committee refer to the Editor's and Business Editor's reports.

HENRY N. RITTENHOUSE, *Chairman Publishing Committee.*

Philadelphia, March 27th, 1876.

The Editor's report to the Publishing Committee was read, and as it gives a general account of the number of original essays which appeared in the "Journal," its publication will be a matter of interest and serve to stimulate members and others to continue their contributions to its pages.

To the Publishing Committee:

The Editor respectfully reports that the "Journal" has been promptly issued every month and that the interest manifested in it by its readers has been considerably in excess of former years, as will be seen by the comparative account given below, and by the fact that several numbers were issued consisting almost exclusively of original matter. The Pharmaceutical Meetings have contributed very essentially to this gratifying result, not less than twenty papers of more or less interest and importance having been contributed to the "Journal" from this source alone. The Editor would urge upon the members of the College to continue their interest in the Pharmaceutical Meetings and the "Journal" by reporting their observations either verbally or preferably in writing, and thereby contribute to the general stock of knowledge. It may safely be expected that during the coming summer ample opportunities for study and observation will be afforded through the International Exposition, and it is to be hoped that this opportunity will not be lost sight of by the members. The invitation extended last year to report to the Registrar the subjects of the papers to be read, in advance of the meetings, has only in a few instances been responded to; it is now renewed in the hope that in the future members will more frequently avail themselves of the opportunity to give notice in advance of the subjects intended for discussion.

During the year closing with the March number, there have been published in the "Journal," exclusive of authors' printed communications, original translations, abstracts and editorials, ninety-six original papers, which is seventeen and twelve papers more than appeared in the "Journal" during the two preceding years. Among these numbers are included abstracts of ten theses, against sixteen and eighteen during the preceding years. The total number of original essays, exclusive of theses, were, therefore, for the year ending March, 1874, sixty-six; March, 1875, sixty-three, and March, 1876, eighty-six. Of the latter number, twenty of which were read at the Pharmaceutical Meetings, sixteen treated of subjects belonging to materia medica, twenty to chemistry, thirty-five to pharmacy and fifteen to subjects of more general interest. Of the ten theses seven were devoted to subjects of materia medica, two to pharmacy and one to chemistry. The total of ninety-six papers were contributed by seventy-two authors, against fifty-two up to March, 1875, and sixty to March, 1874. During the past year, three authors contributed five papers each, two authors three papers each, and eight authors two papers each, the remaining fifty-seven papers having been written by as many contributors. Sixteen of the authors are members of the College and contributed twenty-seven papers.

The amount of original matter which was placed at the Editor's disposal during the past year rendered the condensation of most of the interesting material found in other journals necessary; and if, as is to be hoped, the interest of original contributors in the "Journal" does not slacken during the coming year, there will be much of original matter available; for, as far as can be judged from a hasty examination of the theses presented at the last examination, a larger number than usual appear to be adapted for publication in the form of abstracts.

In this connection it is proper to mention that, aside from the reports of their meetings, two papers have been published after having been read before the New York Alumni Association of the Philadelphia College of Pharmacy, a body composed of graduates of this College residing in the city of New York and vicinity.

JOHN M. MAISCH, *Editor.*

Philadelphia, March 24th, 1876.

The Business Editor's report to the Committee on Publication, detailing all the operations of his department, was read by Mr. Bullock. It is a very satisfactory exhibit, and continues to show the judicious management of Mr. Wolle.

Mr. Bullock further read the report of the Treasurer of the Publishing Committee. It shows a sound financial condition, and exhibits a steady improvement from year to year.

The report was, on motion, accepted.

The chairman of the Committee on the Sinking Fund was rendered by Thos. S. Wiegand, showing a balance in his hands of \$907.94.

Mr. Bullock, on behalf of the Committee on the Centennial, reported subscriptions nearly sufficient to accomplish their purposes, and with a slight effort on the part of those who have not yet contributed, the amount necessary would soon be obtained. It was the intention of the committee to fit up the College generally.

A gentleman, a native of this city, had been engaged by them to attend daily at the College during the Exhibition, who is conversant with the French and German languages.

The committee would request the members to interest themselves, and call at the College and witness the work being performed.

A printed letter from the "National College of Pharmacy," dated Washington, March 22d, 1876, and addressed to this College, was read. This letter treated upon the disagreement which has lately arisen between some colleges of pharmacy in the United States, relative to the conferring of degrees and titles. The matter was commented on by Messrs. Maisch, Bullock and Remington, but as the subject was thought to be one requiring more mature deliberation than could be given to it at this meeting, a motion was made and adopted to refer the letter to the Board of Trustees for their consideration.

George W. Earl, a member of the College, placed at the disposal of the Committee on Centennial Preparations one hundred pounds of white lead, which was, on motion, accepted, and Mr. Earl is entitled to the thanks of this College for the donation.

A letter from William Stahler, of Norristown, Pa., communicating the intelligence of the death of J. Howard McCrea, a member of the College, was read and referred to the Committee on Deceased Members.

The Treasurer reported the name of a member who was five years in arrears to the College; on motion his name was ordered to be stricken from the roll.

The Treasurer further reported that August Hohl had sent in his resignation, which was, on motion, accepted.

Prof. Remington, in a few suitable remarks, presented to the College, from a number of members, a portrait in oil of the late Professor Procter, stating that it was previously the intention to have had a bust prepared, but owing to some difficulties, which finally proved insurmountable, the project was abandoned, and the

portrait was substituted in its stead. He alluded to Mr. Andrew Blair as having assisted in the undertaking.

On motion of Mr. Boring the portrait was accepted, and the thanks of the College were ordered to be tendered to Prof. Remington and those who assisted him in the matter.

Prof. Maisch called the attention of the College to the Annual Meeting of the American Pharmaceutical Association in September next, and suggested the appointment of a committee of five to act in conjunction with the Local Secretary of the Association, Dr. A. W. Miller, in making such arrangements as may be necessary for the accommodation of the association.

The motion was adopted, and the President appointed Messrs. J. M. Maisch, E. M. Boring, Wm. McIntyre, Andrew Blair and Joseph P. Remington the committee. On motion of Mr. Bullock, the committee were authorized to employ such help as they might deem necessary.

Prof. Maisch again appealed to the members present, as well as to those absent, to come forward and help to arrange the Herbarium, which was now in an advanced state of progress. Mr. Mattison moved that Prof. Maisch be empowered to employ such help as he might think proper to complete the undertaking, which motion was adopted.

This being the annual meeting, an election for officers, trustees and standing committees was ordered. Charles Wirgman and Albert P. Prown, acting as tellers, reported the following gentlemen unanimously elected to the various positions enumerated below:

President—Dillwyn Parrish.

First Vice President—Charles Bullock.

Second Vice President—Robert Shoemaker.

Treasurer—Samuel S. Bunting.

Recording Secretary—William J. Jenks.

Corresponding Secretary—Alfred B. Taylor.

Board of Trustees—Robert Bridges, M. D., John M. Maisch, Daniel S. Jones, Thomas S. Wiegand, James T. Shinn, T. Morris Perot, William B. Webb, Joseph P. Remington.

Publication Committee—John M. Maisch, Henry N. Rittenhouse, Thomas S. Wiegand, James T. Shinn, Charles Bullock.

Sinking Fund Committee—Thomas S. Wiegand, T. Morris Perot, James T. Shinn.

Editor—John M. Maisch.

Librarian—Thomas S. Wiegand.

Curator—Joseph P. Remington.

There being no further business to claim the attention of the meeting, then, on motion, adjourned.

WILLIAM J. JENKS, *Secretary*.

MINUTES OF THE PHARMACEUTICAL MEETING.

The seventh regular meeting of the session was held April 18th, 1876, A. P. Brown in the chair. The minutes of the previous meeting were read and approved. Prof. Maisch made the following donations to the library and museum: "Proceedings of the Seventh Annual Meeting of the California Pharmaceutical Society, also of the Third Annual Meeting and Commencement Exercises of the California Col-

lege of Pharmacy, etc." And "The Little Book of German, a High School Primer," by C. C. Schaeffer, late Professor of the German language in the University of Pennsylvania. From Geo. W. Kennedy, Pottsville, "Cylindrical Specimens of Rock Borings from the Pennsylvania Diamond Drill Company." From J. U. Lloyd, Cincinnati, resin of podophyllum,—fluid extract gossypium herbaceum from fresh bark, crystals from prickley ash bark, some roots illustrating a bale of *hydrastis canadensis*, and carbonate of potassium which had been sold (probably by mistake) for bromide of sodium. In regard to these Mr. Lloyd writes: "The resin exists in podophyllum peltatum, and is distinguished by being soluble in ether, while that prepared by the U. S. P. will but partially dissolve in this menstruum. It is being experimented with to ascertain its value as a medicinal agent.

"The crystalline substance marked from 'prickley ash bark' is a proximate organic substance which exists in considerable amount in the barks of *xanthoxylum fraxineum*. It has never been experimented with as a medicine that I am aware of. It is tasteless, colorless, insoluble in cold water, very slightly soluble in boiling water; somewhat in cold alcohol; quite soluble in boiling alcohol. Nitric acid turns it yellow, and dissolves a small amount, turning yellow. Sulphuric acid dissolves it freely, forming a beautiful transparent deep-red solution; water added to the solution produces a white precipitate; the liquid in which it is suspended is colorless. The precipitate presents the exact properties of the original substance. At 212° F. the sulphuric acid solution decomposes, sulphurous acid being evolved freely and a black precipitate formed. When water is added and the mixture thrown on a filter the filtrate passes colorless. It will not reduce an alkaline solution of sulphate of copper. When boiled with dilute sulphuric acid, and tested for glucose, there is no reaction with the copper solution. It will not form salts with dilute acids. Solution of caustic potassa does not seem to affect it.

"The fluid extract of gossypium is a specimen of 160 bottles I have distributed to practicing physicians in our hospitals and over the country. I trust to be able to learn something definite in regard to the preparation to present in my report to the American Pharmaceutical Association."

"A lot of about 500 lbs. of *hydrastis canadensis* was recently offered for sale in Cincinnati. Upon examination, it proved to be about half both root (*trillium pendulum*); while mixed throughout the entire mass was *serpentaria*, *cypripedium*, *sanguinaria*, may-apple and other substances. The question is: 'Can we ever do away with this loose business?' Will there ever be a universal demand for prime indigenous botanical medicines? Must those who will furnish good medicinal roots and barks be compelled to compete with traffickers of this description? The above example is but one of many."

Prof. Remington read a paper on "a singular reaction in a prescription" (see page 211). The Professor had continued his experiments, and the opinion expressed at the last meeting was confirmed. The presence of some free acid is necessary, and if neutralized, the color will disappear; the green color is due to the yellow color of the syrup, and to the blue of the tannin and iron reaction.

Prof. Maisch exhibited a sample of belladonna ointment, which, at the house of the patient, had separated into a bright, pale-green lower layer, the upper stratum being of a brownish color. It had, probably, been subjected to changes in temperature.

Prof. Maisch exhibited, from Walter E. Bibby, ammoniac in powder, retained in this condition by admixture with sugar of milk; also mercury one part and sugar of milk two parts, rubbed together in a dry mortar without any further addition. The extinction of the mercury being rapid, and little labor required, this process suggests itself as a convenient way of getting the various preparations of mercury. Mr. Bibby will continue these experiments and report at the next meeting.

Dr. Miller exhibited spermaceti obtained from oil of rose, one fluidounce, purchased as the best oil in the market, having yielded eight grains of the adulterant.

J. T. Farr inquired for a process for keeping powdered camphor. The use of glycerin has recently been recommended, but for large quantities the process of sublimation into a large chamber, as suggested by J. C. Lowd ("Proc. Am. Phar. Asso.", 1871, p. 441), appears to be the best known.

Prof. Remington called attention to the fact that mustard would sometimes fail to act from the skin being insusceptible.

The statements by two writers to the *Drug. Circ.*, reporting the occurrence of an effervescence on mixing spirit of nitre and fluid extract of *ura uris*, being referred to, Prof. Maisch read a paper on this subject, which he had just received from M. S. Bidwell, Elmira, N. Y. (See page 214.)

Dr. Miller exhibited gold-beater's skin, prepared in such manner as to be opaque; also, hog bladders thoroughly cleansed for druggists' use.

Prof. Remington spoke of a new kind of lint which is prepared by a physician of this city. It is corrugated, thick white paper, strong and elastic, absorbent, and may be made styptic.

On motion, a vote of thanks was given to the contributors of specimens and papers.

WILLIAM MCINTYRE, *Registrar.*

PHARMACEUTICAL COLLEGES AND ASSOCIATIONS.

AMERICAN PHARMACEUTICAL ASSOCIATION—The following report has been made by the Committee on the Ebert Prize:

To the President of the American Pharmaceutical Association:

The Committee on the "Ebert Prize" respectfully report that they have examined the papers presented at the last meeting of the Association, and found the majority of them to be creditable to their authors and to the Association in whose "Proceedings" they have been published.

The conditions governing the award, as stipulated by its founder, are such that the majority of the papers offered to the Association, although valuable and instructive, do not come within the scope intended, as competing for the award. A critical examination of the papers resulted in limiting the number to those on phosphoric acid and on pancreatin. Regarding these, the committee would respectfully offer the following remarks:

On phosphoric acid three valuable papers were presented, one of which, by Prof

Markoe, suggests a new process for preparing diluted phosphoric acid by the action of bromine upon phosphorus in the presence of nitric acid. This is an important modification of Pettenkofer's process, proposed in 1866, wherein the oxidation of the phosphorus is effected by the agency of iodine and subsequently water, some nitric acid being finally used to effect the complete oxidation of any phosphorous acid present. While the committee acknowledge the entire safety of the new process, if properly managed, yet they cannot refrain from taking into consideration the slowness of the process if conducted without very frequent supervision, but more especially the introduction of a new element of danger, requiring certain precautions; and they cannot admit that any danger is connected with the more expeditious "Pharmacopœia" process, even when carried out on a large scale, if the directions of the "Pharmacopœia," particularly in regard to the strength of the nitric acid, are adhered to.

Mr. Louis Dohme's and Prof. Remington's papers treat substantially of the same subjects, though the former enters more deeply into the conditions connected with the conversion of one into another variety of phosphoric acid. Both papers point out a notable difference in the strength of the dilute phosphoric acid as prepared by the two processes of the "Pharmacopœia," and notice again the presence of impurities (soda) in the commercial glacial acid, which *retard* but do not *prevent* its complete change into orthophosphoric acid.

Graham, in his classical investigations of the phosphoric acids, has shown that the glacial acid may become contaminated with impurities from the vessels in which it may be prepared, and such impurities were proven to exist in commercial acid as early as 1860, ("Amer. Jour. Phar.," 1860, p. 193). The introduction of soda for the purpose of hardening glacial phosphoric acid was first noticed by Brescius in 1867, and subsequently confirmed by Prof. Prescott and by the authors of the two papers mentioned. Regarding the conversion of meta- and pyrophosphoric into orthophosphoric acid, Graham has observed that it may be done by boiling their aqueous solutions, more rapidly in the presence of free mineral acids. The conversion with water alone is best effected, according to Littleton Thompson (1874), by heating the concentrated solution, for which purpose Mr. Dohme finds a temperature of from 280° to 300° F. to be required.

The aqueous solutions of metaphosphates were found by Graham to be converted gradually into orthophosphates, but to effect a similar change of the pyrophosphates the presence of a mineral acid was found necessary, and, according to Weber, the most rapid change is produced by sulphuric acid. Reynoso, however, succeeded in 1852, in changing the meta- and pyrophosphates readily into orthophosphates by exposing their solutions to a temperature of 280° C. (536° F.) As far as the behavior to ferric chloride is concerned, the conversion may be completed by prolonged boiling in the presence of nitric acid.

The function of the pancreatic liquid, according to Lehmann, was first recognized by Valentin to consist in transforming into sugar such starch which may arrive in the duodenum in an unaltered condition. The discovery, by Claude Bernard, that the pancreatic liquid is capable of decomposing neutral fats into fatty acids and glycerin, has been admitted by all subsequent investigators; but the availability of this property for the purpose of digestion, as asserted by Bernard, has been

denied, Bidder and Schmidt, among others, proving that the decomposition of fats is prevented by the presence of acids and of the digestive fluids of the stomach. Dobell, in 1868, found the pancreatic liquid of pigeons always to possess an acid reaction, and to have the power of emulsionizing lard, but not to decompose it. In most cases, however, and more particularly after feeding, the reaction of the pancreas is alkaline, and this condition, or the absolute absence of free acid, appears to be necessary to effect the decomposition of the neutral fats. Whether this is or is not an important function of the pancreas in the animal economy seems to be of minor importance for the question before this committee; but, since pancreatic preparations have been recommended and used in medicine, it was important to know whether or not the pancreatic liquid would lose its identity or remain unaltered when in contact with the digestive principles of the stomach, and this question appears to be decided by the experiments of Prof. Scheffer, proving that the presence of free mineral acid, or of pepsin and free acid, not only *prevents* the action of the pancreatin, but that the latter is *destroyed*.

The committee deem this short criticism (made in a friendly spirit) as necessary to explain the conclusion to which they have arrived, viz., that the results attained to by the authors of these papers have been foreshadowed by the investigations of previous writers to such an extent that they do not, in the judgment of the Committee, *fairly* come within the provisions prescribed by Mr. Ebert in founding the "Ebert Prize."

CHAS. BULLOCK,
 W. H. PILE,
 JOHN M. MAISCH.

Philadelphia, March 17, 1876.

MASSACHUSETTS COLLEGE OF PHARMACY.—The tenth annual commencement was held at Parker Memorial Hall, April 20th. After some introductory remarks, by President S. M. Colcord, an address was delivered by Francis Wharton, LL.D. The degree of graduate in pharmacy (Ph.G.) was conferred upon the following gentlemen: Benjamin F. Bradford, Wm. A. D. Cragin, Eugene F. Dunbar and Thos. R. A. Shannon, of Maine; Chas. D. Chase, Ashton E. Hemphill, Wm. M. Howes, Edward O. Punchard, Benjamin F. Smith and Duane B. Williams, of Massachusetts, and John E. Groff, of Rhode Island. The valedictory address was delivered by Prof. J. M. Merrick, B. Sc.

NEW YORK ALUMNI ASSOCIATION OF THE PHILADELPHIA COLLEGE OF PHARMACY.—At the annual meeting, held in Plimpton Hall, President P. W. Levering in the chair, several amendments were made to the constitution, and the following officers elected to serve the ensuing year: President, Henry S. Wellcome; Vice Presidents, J. W. Wood, R. J. C. Williams; Secretary, Edward Plummer; Corresponding Secretary, Wm. Wilson; Treasurer, A. J. Ditman; Members of the Executive Board, to serve three years, T. B. McElhenie, J. Messing; Delegates to American Pharmaceutical Association, B. F. Fairchild, H. S. Wellcome, J. Jungmann, F. C. Von Weber, M. D., Wm. Wilson, J. W. Wood. The retiring president delivered the annual address, giving a brief review of

the progress of pharmacy during the past century, and of this association during the past year, offering suggestions for extending the usefulness of it, after which the president elect, Mr. Wellcome, took the chair with acknowledgements. He presented some specimens of "Goa Powder," the remedy for ringworm which has been the object of some attention in the medical and pharmaceutical press during the past year. Regarding the subject of stale and adulterated herbs he said that he had received communications from different sources verifying the statements made at a previous meeting on the subject (see page 141 of this volume). He exhibited a specimen of fluid extract of *Erioduction Californicum*, and stated that recent reports showed it to possess positive action in bronchial affections, and that it promised to become a valuable remedy.

Mr. Wood read an interesting paper on the application of glycerite of starch, and urging its use in the place of Ung. Simplex, U. S. P.

A note, by J. P. Routh, on the following prescription was read, some difficulty having been experienced by some in dispensing it: \mathcal{R} , phosphorus, gr. vi, mucil. acacia, $\mathfrak{f}\text{ziii}$, oil gaultheria, $\mathfrak{f}\text{zi}$, tinct. nux vomica, $\mathfrak{f}\text{zvii}$, ferric tartrate, $\mathfrak{z}\text{v}$. He melted the phosphorus in absolute alcohol, agitated it until it became divided into minute globules, placed the test tube under a stream of cold water, continuing a brisk agitation until it was reduced to an almost pulverent form; this was added to the tartrate of iron, previously reduced to a fine powder, and triturated until the alcohol was entirely driven off; next the oil of gaultheria and mucilage were added, then gradually the tincture of nux vomica; the result was a permanent mixture.

The meetings of the association will hereafter be held quarterly, next one being in July, this best suiting the convenience of members.

ALUMNI ASSOCIATION OF THE PHILADELPHIA COLLEGE OF PHARMACY.—The Twelfth Annual Report, we are informed, is nearly ready for distribution, and will be sent to all members in the course of a few days. Any graduate, desiring a copy of it, can obtain it by addressing the Treasurer, E. C. Jones, Fifteenth and Market streets, Philadelphia.

THE MARYLAND COLLEGE OF PHARMACY conferred the degree of Graduate in Pharmacy upon the following gentlemen at the Commencement, held in the Concordia Opera House, March 29th: Frank Dorsey (thesis, Lead and its compounds), Millard S. Gore (*Paullinia sorbilis*), H. Kornmann (Oxygen), Rich. B. Winder, Jr. (Sodium), Frank A. Meikle (Toxicology), Chas. W. Gardner (Percolation), Wm. G. Hurd (Tobacco), Henry Dietrich (Fluid extracts), Gust. A. Knabe (*Acon. Napellus*), Wm. Geo. Danim (*Anthemis nobilis*), Martin Lappe (Hydrogen), Edward Jones (*Cytisus scoparius*), Frank P. Zimmer (Phosphates), J. C. Michael (Carbon), Frank L. Wallis (Nickel and its salts), Henry O. Damm (*Asarum Canadense*), J. Br. Baxley, Jr. (*Datura Stramonium*), John H. Brooke (Fluid extracts), and John Stauff (Glycerin). The degrees were conferred and the College prizes distributed by the President, Dr. Jos. Roberts, and the Alumni prize by Mr. L. Dohme. Prof. J. F. Moore delivered the Valedictory Address.

At the regular meeting, held April 13th, the Hall Committee reported the purchase of the building and grounds heretofore known as the Grammar School, No. 3, which will be fitted up for the permanent use of the College.

At an adjourned meeting, held April 19th, Mr. J. F. Hancock read a paper on Modern methods in pharmacy (see p. 199), and exhibited a number of the modern preparations treated of.

Mr. W. S. Thompson exhibited samples of pills of dried sulphate of iron, made with gum syrup and with glycerin, the latter being much smaller and handsomer.

The precipitate from a mixture of Creuse's tasteless tincture of iron and phosphoric acid was exhibited, and, after some discussion, referred to Mr. L. Dohme for investigation.

THE NATIONAL COLLEGE OF PHARMACY AT WASHINGTON, D. C., at its fifth annual meeting, received the reports of the various standing and special committees, and adopted the recommendation of Prof. Oldberg, to consolidate the offices of recording and corresponding secretary. The president, Mr. R. B. Ferguson, then delivered his annual address, after which the following officers were elected to serve during the ensuing year: President, R. B. Ferguson; Vice Presidents, Chas. Becker and D. P. Hickling; Secretary, J. C. Fill; Treasurer, Wm. S. Thompson; Curator, H. E. Kalussowski; Board of Trustees, J. A. Milburn, W. G. Duckett, R. A. Bacon, W. B. Entwisle, Walter Drew and J. R. Major. At an adjourned meeting the report of the Committee on Pharmaceutical Education, was after due consideration, referred to the Board of Trustees, and the chair announced the various standing committees for the current year. A report on amendments to the constitution and by-laws was discussed and referred back to the special committee.

CINCINNATI COLLEGE OF PHARMACY.—The annual commencement took place at College Hall, on the evening of March 9th, the Germania Orchestra being in attendance. The exercises opened with prayer by the Rev. Henry D. Moore, after which the President, Dr. F. L. Eaton, conferred upon the following gentlemen the degree of graduate in pharmacy, (Ph.G.):

Chas. H. Angevine,	J. A. Koller,	Ed. A. Schmidt,
Anton Boehmer,	H. J. Marshall,	W. G. Sheickner,
Chas. Diehl,	William Rendigs,	C. D. Wanglen,
Geo. T. Greer,	E. M. Roberts,	Albert Wetterstroem.
Emil Heun,	J. W. Rossiter,	

The address on behalf of the Board of Trustees was delivered by Mr. S. A. Miller, whose excellent remarks on "The relation of pharmacy to other professions" were well received. Prof. Fennel's medal, for the best examination in pharmacy, was awarded to William Rendigs; Prof. Wayne's, for the highest average in Materia Medica and botany, to Geo. T. Greer, and Prof. Judge's, for the best examination in chemistry, to J. W. Rossiter. The Alumni medal, for the best general average, was presented to George T. Greer, by the President of the Alumni Association, Mr. Jos. H. Feemster. Dr. Eaton, chairman of the Board of

Trustees, then stated that in the contest for the Alumni prize it occurred that the averages of the two highest were so close that by only one-half per cent. difference did the fortunate contestant carry away the honor. In view of this fact, and of the sterling ability exhibited by Albert Wetterstroem (the unlucky contestant) during his collegiate career, the Board of Trustees had decided to award him a medal for general proficiency.

The address, on behalf of the faculty, was delivered by Prof. E. S. Wayne, and the valedictory, on behalf of the graduating class, by Mr. Wm. Rendigs.

The presentation, by Chas. Angevine, on behalf of the class, of one hundred dollars, to be appropriated to the building fund of a new college building, was a pleasant feature in the evening's programme. The exercises then closed with benediction by the Rev. Henry D. Moore.

Later in the evening the Alumni entertained the new graduates, the faculty, board of trustees, and a number of invited guests, at their annual banquet.

ALUMNI ASSOCIATION OF THE CINCINNATI COLLEGE OF PHARMACY.—The following officers were elected at the annual meeting: President, Louis Schwab; Vice Presidents, W. J. Rattcliff and Wm. Rendigs; Treasurer, Theo. F. Norwood; Secretary, A. W. Bain; Corresponding Secretary, John E. Martin; Executive Board, W. B. Strang, John Rielag, Geo. F. Greer and Anton Boehmer; Delegates to the American Pharmaceutical Association, Jos. H. Feemster, Chas. F. Keener, L. Schwab, Theo. F. Norwood and Chas. P. Rendigs.

LOUISVILL COLLEGE OF PHARMACY.—The following gentlemen, having passed a successful examination according to the rules of the College, were by the Board of Directors declared "Graduates in Pharmacy," March 13th. C. W. Newton, W. H. Patterson, George Stauber, H. Huecker, H. Langenhan, J. B. Baird, M. Von Beust, L. R. Williams and H. Vonderbeck (examined June, 1875).

At the meeting of the Board of Directors, chosen at the annual meeting in March, the following officers were elected, viz., President, C. Lewis Diehl; Vice-Presidents, Emil Scheffer, Vincent Davis; Recording Secretary, Fred. C. Miller; Corresponding Secretary, Wm. G. Schmidt; Treasurer, Edward C. Pfingst; Curator, James A. McAfee; Directors, F. Lingelbach, C. Tafel, John Colgan, Wm. W. Smith and S. F. Dawes.

CHICAGO COLLEGE OF PHARMACY.—The commencement exercises took place at the First M. E. Church, March 13th. The degree of Graduate in Pharmacy was conferred by President J. W. Mill upon the following candidates: Julius H. Wilson (oxide of zinc), Fred. C. Werner (wild yam root), James M. Kirkley (glycyrrhizate of ammonium), La Motte Lovett (Pharmacopœia), Geo. W. Hoyt (Tinct. chloride of iron), J. Leonard Mulfinger (Mercury), Alvin G. Hammer (Syr. Ferri Iodidi), Geo. H. Loesch (Calomel), E. Geo. F. Bischoff (Emulsions), Almon R. Thurber (Medicated Waters).

Addresses were delivered on behalf of the faculty by Prof. H. D. Garrison, and on behalf of the graduating class by Mr. J. H. Wilson.

THE WESTERN WHOLESALE DRUG ASSOCIATION is the title of a new association composed of Wholesale Druggists in the Western States, and constituted in Indianapolis, March 15th and 16th, under the presidency of Mr. James Richardson, of St. Louis; Messrs. A. B. Merriam, of Cincinnati, and N. H. Collins, of St. Louis, acting as Secretaries. Various committees appointed at the first session reported at the subsequent sessions. The employment of commercial travelers found no favor, but the total abolition of the system being impossible now, various rules in regard to these were adopted. The following resolution relating to sales on credit was adopted:

Resolved, That this convention recommend that all credits be shortened as soon as possible, and as much as practicable, and that, as a rule, the goods sold for the least profit should be sold on the shortest time.

The following recommendations from the Committee on Legislation were adopted:

1. That, on the formation of a permanent association, the necessary steps be at once taken to put ourselves in communication and co-operation with Philadelphia and other Eastern drug exchanges to secure such tariff regulations or charges, as may best promote our mutual interests, and that similar action be taken regarding the matter of stamp tax, to render it as simple and as little burdensome as possible.

2. That a united effort be made to relieve wholesale druggists selling alcohol, wines or liquors for medicinal purposes only (so far as they can control it) from the necessity of exhibiting the wholesale liquor dealer's sign, now required under the general law, and so far as possible to secure exemption from unintelligent or unjust local enactments, or ordinances in regard to licenses.

3. That the law now in operation in New York and some of our Western States, requiring those desirous of practicing pharmacy to pass a competent examination before being allowed to do so, is a protection to the wholesale druggist, as well as to the public, and we, therefore, seek to extend its benefits to those States which have not yet adopted it.

4. That we emphatically condemn the adulteration of drugs and chemicals, especially such as are used as medicinal agents, and that we pledge ourselves to use our influence and our efforts to discourage it, and to elevate the standards of purity and excellence in such cases.

After the adoption of the constitution and by-laws, Mr. James Richardson was elected President; A. Peter, of Louisville, R. McReady, of Cincinnati, R. Brown, of Indianapolis, Thomas K. Lord, of Chicago, and John Ewing, of Pittsburgh, Vice Presidents; A. B. Merriam, Secretary; and S. M. Strong, of Cleveland, Treasurer; Board of Control—C. F. G. Meyer, St. Louis, chairman; C. C. Riekirt, Cincinnati; R. A. Robinson, Louisville; Henry W. Fuller, Chicago; D. R. Noyes, St. Paul.

On motion of Mr. Noyes, of St. Paul, the following resolution was adopted:

Resolved, That the association is in hearty sympathy with the retail drug trade, and seek to promote their interests as well as our own.

The next meeting will be held in Chicago, on the second Wednesday of February, 1877.

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN.—At the pharmaceutical meeting held March 1st, Mr. Rees Price read a paper on the *preparation of ferrous phosphate*. The British "Pharmacopœia" directs to precipitate 3 oz. of ferrous sulphate by 2½ oz. of sodium phosphate, in the presence of 1 oz. of sodium acetate, to stir well and filter, the acetate being added for the purpose of neutralizing the sulphuric acid set free, and liberating acetic acid, in which the ferrous phosphate is less soluble. The author found that, by following this process, 28.2 per cent. of iron remained dissolved in the filtrate, which could be precipitated by the further

addition of sodic phosphate; and he proposes to omit the acetate and increase the phosphate to nearly three times the weight of the iron salt (42 parts of the former and 15 of the latter were found necessary), when the filtrate will scarcely contain traces of iron.

Prof. Attfield was not previously aware that so large a proportion of iron could be lost by the "Pharmacopœia" process, and explained the action of the excess of the phosphate used, as suggested by Mr. Price, by the conversion, through the liberated sulphuric acid, of the ordinary sodic phosphate Na_2HPO_4 into NaH_2PO_4 . This monosodium phosphate could be reconverted into the ordinary or disodium salt by reaction with carbonate of sodium.

Mr. Brownen had obtained almost pure ferrous phosphate as a white crystalline magma by acting with phosphoric acid upon iron filings or turnings, and straining the solution.

Mr. John Moss read a lengthy and very-interesting paper on the *structure and development of Pareira stem*, which cannot well be abstracted. It is printed with two wood-cuts in the London "Pharmaceutical Journal," March 4, pp. 702—707.

Mr. W. A. H. Naylor read a paper on *Cosmolin*, referring therein to the investigations of Dr. A. W. Miller, apparently without being aware of the later experiments ("Amer. Jour. Phar.," 1875, p. 257). Mr. Naylor's object being to determine its composition, he found it to consist of hydrocarbons with a little (.69 per cent.) moisture, and traces (.04 per cent.) of ash. By dissolving it in warm ether and collecting the portions separating on exposing the solution to different degrees of low temperature, he obtained fractions melting between the extremes of 16.5 and 53.5° C. Similar results were obtained with each of the two portions of cosmolin, soluble and insoluble in boiling alcohol. By fractional distillation, portions having different melting points were likewise obtained. The author concludes from his experiments that cosmolin is a mixture of paraffins.

At the last meeting of the session, held April 5th, Mr. T. H. Hill presiding, Professor Attfield called attention to a sample of foreign *crystallized glycerin*. To obtain it, it appeared to be necessary that the glycerin should be perfectly pure, fairly cold, and subjected to considerable vibration. The crystals, it was said, could be used for purifying slightly impure glycerin, in which they would grow, leaving the impurities in the mother liquor.

Mr. E. M. Holmes stated that the leaves and flowers sent, under the name of *Garrya elliptica*, by Prof. Maisch (see "Amer. Jour. Phar.," 1875, p. 279), appeared to belong rather to *Garrya Fremontii*, in having the leaves smooth underneath and not undulated. A living specimen of *G. elliptica* was exhibited for comparison.

A paper by T. H. Powell and J. Bayne was read, in which experiments were detailed, made for the purpose of ascertaining the nature of the product obtained by the action of *hydrocyanic acid upon calomel*. After giving the observations of Scheele, Regimbeau, Soubeiran and others upon the black powder formed by the two compounds, the authors ascertained that the presence of free hydrochloric acid prevents the dark coloration. On adding hydrocyanic acid to calomel, a liquid results which contains free hydrocyanic and hydrochloric acids and mercuric chloride and cyanide; if the remaining powder be repeatedly acted upon by fresh portions of hydrocyanic acid, a black powder remains, which becomes grey on drying, and

which is probably metallic mercury. Prof. Attfield did not agree with this conclusion; metallic mercury was obtained by sublimation, but that the residue was nothing but metallic mercury had not been proven. He hoped that the authors would continue their researches.

Mr. W. Willmott read a paper on *Linimentum Saponis, Br. P.*, with special reference to its employment in hospital practice, in which the directions contained in the various editions of the London and British "Pharmacopœias" are discussed, and compared with the formulas in use by five of the London hospitals; the author suggests the following modification of the formula: 16 oz. of soft soap (free from caustic potash), 8 oz. of camphor, and 2 fl. oz. of oil of rosemary are mixed with 5 pints (100 fl. oz.) of rectified spirit (spec. grav., 0.838), the mixture is occasionally stirred during twenty-four hours, strained or filtered, and mixed with 3 pints (60 fl. oz.) of distilled water. The spirit rapidly disintegrates the soap, and dissolves the neutral portion only, leaving behind the irritating alkaline matter, which is soluble in water. The liniment remains clear and free from sediment at all temperatures.

In the discussion which followed, the speakers expressed themselves against the substitution of soft for the hard soap ordered by the "Pharmacopœia." The excess of soap used in the British "Pharmacopœia" process could be utilized by pressing it in a mould, and using it for washing.

PHARMACEUTICAL SOCIETY OF PARIS.—Mr. Coulier presided at the meeting held February 2d, at which Mr. Planchon gave an account of the recent researches on the various transformations of the larvæ of cantharides.

Mr. Légrip read a note on *Dietheralysis*,¹ which is the name given by him to a new method for extracting vegetable juices; it consists in mechanically dividing the fresh plants or their parts, collected during the period of their greatest activity, and then subject them, in a suitable apparatus, to the direct action of the ether. Two layers of liquid are formed, the upper green one being a solution of chlorophyll and fat in ether, the lower aqueous layer being thick and brown, and containing all the proximate principles, dissolved or not, which have been expelled from the cells with the vegetable fluids under the pressure of the ether. Even odorous juices retain, under the ether, their peculiar perfume.

The facts stated can be readily demonstrated by making a number of perforations in a test-tube, enclosing in it a fresh leaf and suspending the tube in a larger vessel containing ether, and closing the latter hermetically. The ether will soon begin to assume a green color, and the juice to separate in minute brownish drops, and the leaf will finally be left completely decolorized. It is evident that the constituents will by this process be obtained in their natural condition, without any alteration.

Mr. Limousin observed that ether would dissolve many proximate principles; but Mr. Légrip regards the action of the ether to be mechanical rather than solvent.

Mr. Limousin called attention to an observation made by A. Duhomme, according to which a hydrometer does not indicate for a time the correct density of the liquid, if this should run over either during or after the immersion of the instrument.

¹ From *δια*, through, by means of; *αιθηρ*, ether; *λυσις*, separation, or *λύω*, to discharge, loosen.

The phenomenon was explained by Mr. Coulier to be due to the *superficial tension of liquids*, which has been studied by Mr. Plateau.

A paper on *Dragon's blood and its falsifications*, by Mr. Henry Bretet, was read. True dragon's blood is not scratched by the finger-nail, yields a red, non-adherent powder, when heated gives of red vapors, and is found to contain very little iron. False dragon's blood, which appears to be made by mixing oxide of iron with resin, differs in each of these particulars, but sometimes imparts a purple-red color to alcohol, proving that some true dragon's blood had been used in manufacturing the imitation.

Mr. Guichard made some remarks on *fluid and syrupy extracts*, and noticed more particularly the fluid extracts officinal in England and the United States. For convenience in dispensing, he has used for some time preparations which, while representing solutions of solid extracts, are prepared by concentrating infusions of the drug to a certain extent, adding some glycerin, and evaporating until the residue represents approximately a solution of one part of extract in an equal weight of glycerin. The author prefers this method to the solution of the solid extract in glycerin or other solvents, and regards the addition of some glycerin, even to ordinary extracts, to be advantageous. Mr. Desnoix coincided with these views, but Mr. Mialhe considered the addition of glycerin unnecessary.

Mr. Petit gave a summary of his researches of the action of *pancreatin upon albuminoid substances*, whereby crystallizable compounds, leucin and tyrosin, analogous to the products of excretion, are formed. The residue from the action of *pepsin upon albuminoids* is always amorphous.

At the meeting held March 1st, a note by Mr. Frebault, of Meursault, was read, on the use of *alkaline picramates as a test for acids and alkalies*. The picramates (dinitramidophenates) of the alkalies and of calcium have a magnificent red color, which by free acid is changed to greenish-yellow, the red being restored by an alkali. A solution of the ammonium salt is readily obtained by acting with an excess of sulphhydrate of ammonium upon an alcoholic solution of picric (trinitrophenic) acid. The calcium picramates keep very well, and may be employed in solution or with paper like litmus.

Another paper, by the same author, was on *The action of iodine upon carminic acid and the coloring principle of logwood*. An infusion of cochineal with distilled water is not affected, but on the addition of a little alkali, or by using ordinary water, is instantly decolorized. The same reaction takes place with an infusion of logwood. Free acids prevent the reaction; the most convenient reagent is a solution of iodine in potassium iodide. The author believes this reaction to be available for the rapid valuation of cochineal, carmine and logwood, and for the estimation of iodine. Fuchsin and the coloring principles of red poppy, mulberries and wine are not decolorized.

A discussion ensued on the *yield of extracts*, Mr. Hoffmann believing that notable differences in the yield from the same material were not obtained, provided the process was not changed. Mr. Guichard, however, cited the experience of several authors, proving the variability of the yield.

To detect the *presence of fuchsin in wine*, Mr. Yvon recommended to treat the suspected wine with animal charcoal, which retains the fuchsin, and from which it may be afterwards obtained by the aid of alcohol.

EDITORIAL DEPARTMENT.

THE INTERNATIONAL EXPOSITION AT PHILADELPHIA will have been opened (May 10th) by the time the present number reaches some of our readers, who are undoubtedly to some extent familiar with the extent which it promises to assume. That there will be much of interest to the pharmacist to see and a great deal to learn, may be expected. Many new and old remedial agents, which are but partially or not at all known in this country, many new or improved apparatus and devices bearing upon the drug business, will doubtless be found among the multitude of articles which have been collected in Fairmount Park from all sections of the globe. While it can scarcely be expected that everything related to pharmacy, more especially all the numerous chemical and pharmaceutical preparations and appliances should be of sufficient importance to claim the same attention, yet much will be noticed possessing lasting intrinsic value. While our readers will not look for minute descriptions of all the features of this Exposition, it will be our aim to select from that which will be presented such matters for more detailed consideration which may appear to be more especially adapted to the wants, or serve for comparison with the products of the American pharmacist.

In this connection, we desire to direct the notice of our readers to the arrangements made by the Philadelphia College of Pharmacy, for the convenience of those visitors more or less directly connected with the drug trade. The Actuary is now daily present at the College building, and prepared to give information and assist strangers in their endeavors to most profitably spend the time which may be at their disposal on the occasion of their visit. The pharmacists, druggists and chemists, from whatever part of the globe they may hail, will be welcome.

The Philadelphia Drug Exchange, we are informed, are likewise prepared to show similar civilities to druggists, so that no one visiting during the Exposition need feel embarrassed for want of advice to further his object.

THE TWENTY-FOURTH ANNUAL MEETING OF THE AMERICAN PHARMACEUTICAL ASSOCIATION will be held in Philadelphia, September 12th, and many members will postpone their trip to the International Exposition until that time, when they may expect to see what may be new and interesting in the pharmaceutical and chemical line, in connection with others who are interested in the same pursuit. An interchange of ideas may thus be had, for which rarely any better opportunity will be afforded. The Committees of Arrangements, appointed by the National Association and the Philadelphia College, are actively at work, and we understand that it will be among their main endeavors to so arrange matters as to afford every attending member the best opportunities of examining minutely and profitably such goods in which, as pharmacist or druggist, he may expect to be most deeply interested, without, in his search after all the novelties, being compelled to neglect the sessions of the Association. The ladies who may accompany the members will also be well cared for by the ladies of this city.

The present year of the Centennial independence of the United States is also of special interest to the pharmacists of this country. Five years ago, the Philadelphia College of Pharmacy celebrated the semi-centennial anniversary of its foundation; three years hence, the New York College will have attained its fiftieth year since its organization; 35 years have passed by since the Maryland College obtained its charter, and 20 years since it was reorganized, and on the 15th of October next it will be twenty-five years since, in New York, the first Convention of Pharmacists and Druggists met, which took the initiatory steps to organize the American Pharmaceutical Association.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

Proceedings of the Vermont Pharmaceutical Association, at the sixth annual meeting, held at St. Johnsbury, October 13th and 14th, 1875. Rutland: 1876, 8vo. pp. 40.

On page 570, of our last volume, will be found a brief account of this meeting; the pamphlet before us contains the various reports in full. Of particular interest to us is the report on legislation, which gives the draft of a plain pharmacy bill, in which, with the least possible complication, sufficient competency of the pharmacists, and their assistants, is aimed at. The bill passed the House by more than a two-thirds vote, but failed in the Senate through the treachery, as the committee tell us, of the Senator from Burlington, a patent medicine dealer, who promised to "take care of the bill," and labored faithfully to defeat it. Our friends deserve better luck next time.

Two papers, on displacement apparatus and on fluid extracts, have been published in the pamphlet; the latter speaks of the faulty officinal formulas for various of the kinds, but unfortunately omits to point out either the faults or remedies therefor. The process recommended in the paper is the same as that patented by Mr. Spencer Thomas, in 1865 (*"Am. Journ. Pharm."* 1865, p. 85, 1866, p. 218, containing also Prof. Procter's comments).

We regret to learn that all the books, records, papers, &c., of this association were consumed by fire, February 16th, which totally destroyed the Secretary's, Mr. A. W. Higgins', store.

Formulae for non-official preparations in general use in the District of Columbia.—Published by E. L. Duvall. Washington: 1875, 8vo. pp. 48.

As this formulary has been prepared by a joint committee of the Medical Society of the District of Columbia and the National College of Pharmacy, an authority is attached to it, at least for the district in which the national capital is situated. Speaking of it as a whole, we are much impressed with the practicability of the formulas framed; but we regret that the joint committee did not see fit to adhere more closely to the formulas for elixirs adopted by the Amer. Phar. Assn. The name of elixir aurantii is very appropriate for the simple elixir, and the absence of the slight amount of cinnamon is immaterial. We object, however, to such names

as elixir calisayæ, when the preparation is made with the sulphates of the four commoner cinchona alkaloids, and calisaya bark is not used. The deviation, in strength, of some formulas from those of the Amer. Phar. Asso., of 1875, is explained by the former having been adopted as early as last August.

Liquor ergotæ should have been called tinctura ergotæ, being made from ergot, with alcohol of about 30 per cent. Syrupus calcii lactophosphatis is directed to be made with lactophosphate of calcium, but a formula for the latter is not given. For making syr. ferri oxidi the saccharated oxide of iron of the German Pharmacopœia is used, without giving a formula for its preparation. If it was intended to refer the apothecary to that pharmacopœia, then formulas for compound liquorice powder and breast tea were likewise unnecessary.

We shall endeavor to make room, in our next issue, for some of the formulas which have not heretofore been published in the "Journal"

Filth diseases and their prevention. By John Simon, M.D., F.R. C. S. Boston: Jas. Campbell, 1876, 12mo, pp. 96.

The author of this masterly essay, being Chief Medical Officer of the Privy Council and of the Local Government Board of England, has had unusual facilities to familiarize himself with the subject, and gives many practical suggestions for the prevention of typhoid fever and allied diseases, the origin of which may be traced to the accumulation of filth. Properly regulated sanitary work being, here, still in its infancy, the Massachusetts State Board of Health have done well to republish this essay and to recommend its being read, and the suggestions heeded by every intelligent person.

Lecções de Botanica arregladas segun los principios admitidos por Guibourt, Richard, Duchartre, De Candolle y otros. Por Joaquin y Juan Dondé (padre é hijo), farmaceuticos titulados, quimicos y naturalistas. Mérida de Yucatan: 1876, 12mo, pp. 259.

Lessons in botany.

Without pretending to be familiar with the literature of Yucatan, we should regard the volume before us as a valuable addition to other available works, on account of its simple and systematic arrangement and the general correctness and conciseness of the manner in which the researches in morphological, physiological, pathological and systematic botany have been treated. To our readers it will be of interest to learn that one of the authors, of whom we brought a biographical sketch on page 96, of this volume, was formerly a contributor to the "Journal."

Bulletin of the Bussey Institution (Jamaica Plain, Boston), part v. Cambridge: Press of John Wilson & Son, 1876, 8vo, pp. 100.

Of the eight papers contained in this part, three are from the pen of Prof. F. H. Storer, viz: Composition of date-stone and of the stones of peaches and prunes, analyses of potassic fertilizers and occurrence of ammonia in anthracite; four papers on the disease of olive and orange trees in California, on grape-vine mildew, on the black knot and a list of fungi near Boston, by Prof. W. G. Farlow, and a

report on the Arnold arboretum by the Director, C. S. Sargent. Six well-executed lithographs accompany this pamphlet, which concludes the first volume of the series.

Report of the Board of Administrators of the Charity Hospital to the General Assembly of Louisiana, session of 1875. New Orleans: 8vo, pp. 105.

Besides the special reports and statistical tables, which may be looked for in such a publication, we find a historical sketch of this institution, by James Burns, M.D., which goes back to the times of Louis XIV and of the foundation of the colony, but, as may be expected, enters more into the details of the operations during the years last past.

The reception, from the authors, of the following reprints is hereby acknowledged:

Studies upon essential oils. By G. Dragendorff.

Structure and developement of Pareira stem, Chondodendron tomentosum R. et. P. By John Moss.

Vaseline. By John Moss.

On further researches on the dissociation of Molecules in solution. By Chas. R. C. Tichborne.

The Opium habit and "Opium-mania cures." By Stanford E. Chaillé, A. M., M.D., &c.

This last pamphlet exposes the criminal doings of a doctor, with whose practices the readers of the "Journal" have already become acquainted, on page 464, volume for 1873. The *Ext. Picus porteana* appears to have been changed now into an "opiumania cure," and the composition was most likely changed also, since Mr. J. Johnson reports it to contain "a good deal of substance in solution" and found only about five grains of opium in half a fluidounce, whereas Prof. Wayne obtained 4.4 grains of morphia in the same quantity.

OBITUARY.

ZADOC DOUGLASS GILMAN died in the city of Washington, D. C., March 15th, in the 60th year of his age, after a brief illness. He was a native of Alexandria, Va., but removed with his parents to Washington, where, after having received a good education, he entered the drug business with Mr. Seth Todd, remaining with his employer as assistant. After the death of the latter, Mr. Gilman purchased the store and business, which he conducted until his demise. He was one of the first members of the various local societies organized in the National capital for the promotion and advancement of pharmacy, and liberally contributed to their support. Energetic, yet-amiabile and courteous in conducting his business, he was devoted to his family, and an active and useful member in the various public organizations in which he interested himself. Within less than two years, the National College of Pharmacy has lost in him by death, the third member of its first Board of Trustees.